

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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ALABAMA, Central

(AL-Z021) CLEBURNE, (AL-Z028) CLAY, (AL-Z029) RANDOLPH, (AL-Z036) COOSA, (AL-Z037) TALLAPOOSA, (AL-Z038) CHAMBERS, (AL-Z043) ELMORE, (AL-Z044) MONTGOMERY, (AL-Z045) MACON, (AL-Z046) BULLOCK, (AL-Z047) LEE, (AL-Z048) RUSSELL, (AL-Z050) BARBOUR

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Below normal rainfall fell across Central Alabama during the months of October and November. Most locations received only 1 to 3 inches of rainfall for the two month total. This led to drought conditions continuing across parts of eastern Central Alabama. Drought conditions worsened for several counties due to the lack of rainfall, including Chambers, Clay, Tallapoosa, Randolph, and Lee Counties.

(AL-Z019) CALHOUN, (AL-Z027) TALLADEGA, (AL-Z035) CHILTON, (AL-Z041) AUTAUGA, (AL-Z049) PIKE

11/20/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Below normal rainfall occurred across much of Central Alabama during the month of November. Most locations received only up to 2 inches of rainfall during the month, which is approximately 3 to 4 inches below normal. This led to drought conditions spreading to include Calhoun, Talladega, Chilton, Autauga, and Pike Counties.

ALABAMA, North

(AL-Z001) LAUDERDALE, (AL-Z002) COLBERT, (AL-Z004) LAWRENCE, (AL-Z005) LIMESTONE, (AL-Z007) MORGAN, (AL-Z008) MARSHALL

11/01/12 03:00 CST	0	Frost/Freeze
11/01/12 08:00 CST	0	

Low temperatures fell to the mid to upper 20s throughout the remainder of northern Alabama on the morning of the 1st. Other areas received a hard freeze the previous night (Oct 31).

ALABAMA, Southeast

(AL-Z065) COFFEE, (AL-Z066) DALE, (AL-Z067) HENRY

11/01/12 00:00 EST	0	Drought
11/30/12 23:59 EST	0	

D2 drought conditions were present across northeastern Coffee, northern Dale, and much of Henry county through November and into December. A small portion of eastern Henry category experienced D3 drought conditions.

ALASKA, Northern

(AK-Z216) LOWER KOYUKUK MIDDLE YKN VLYS

11/08/12 22:00 AKST	0	Heavy Snow
11/10/12 15:00 AKST	0	

(AK-Z214) YUKON DELTA

11/09/12 04:00 AKST	0	Ice Storm
11/10/12 06:00 AKST	0	

A warm front associated with a 986 mb low pressure system in Bristol Bay brought abundant moisture and warming to the Yukon Delta on November 9th. Warm air overriding cold air at the surface produced freezing rain over the Yukon Delta and heavy snow over the Lower Yukon Valley. At Marshall in the Yukon Delta, up to 0.13 inch of rain fell on the 9th while Scammon Bay and Mountain Village had much less rain. At the village of Nulato, 24 inches of snow was reported within 24 hours and a similar amount likely occurred over higher elevations. Other villages in zone 216 received only several inches of snow.

(AK-Z204) EASTERN BEAUFORT SEA COAST

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	11/13/12 05:39 AKST		0	Blizzard
	11/13/12 18:00 AKST		0	

A 988 mb low near Banks Island by 0900AKST on the 13th coupled with a strong 1034 high pressure center over the Chukchi sea created a strong pressure gradient, providing strong winds and blizzard conditions at Barter Island.

Zone 204: Blizzard conditions were observed at Barter Island from approximately 900AKST through 1800AKST on the 13th. The visibility was reduced to one quarter mile or less in snow and blowing snow. There was a peak wind gust of 55 kt (63 mph) at the Barter Island AWSS.

(AK-Z213) ST LAWRENCE IS. BERING STRAIT

11/13/12 18:55 AKST	0	High Wind (MAX 56 kt)
11/13/12 21:55 AKST	0	

A strong 966 mb low pressure center in the southern Bering Sea produced a strong pressure gradient over the Bering Strait during the evening hours of November 13th.

It is estimated that winds gusted to 56 kt/66 mph near the Bering Strait as there was a peak wind gust to 56 kt/66 mph at the Tin City AWOS during the evening of the 13th and is it estimated similar winds occurred nearby.

(AK-Z204) EASTERN BEAUFORT SEA COAST

11/15/12 09:49 AKST	0	Blizzard
11/15/12 16:08 AKST	0	

A 998 mb low just south of Banks Island at 1500AKST on the 15th coupled with a strong 1036 high pressure center over the Chukchi sea created a strong pressure gradient on over the Eastern Beaufort Sea Coast, providing strong wind and blizzard conditions at Barter Island during the late morning and afternoon hours on the 15th.

Zone 204: Blizzard conditions were observed at Barter Island from approximately 1000AKST through 1600AKST on the 15th. The visibility was reduced to one quarter mile or less in snow and blowing snow. There was a peak wind gust of 50 kt (58 mph) at the Barter Island AWSS.

ALASKA, Southeast

(AK-Z027) DIXON ENTRANCE TO CAPE DECISION COASTAL AREA, (AK-Z028) SOUTHERN INNER CHANNELS

11/04/12 12:00 AKST	0	High Wind (MAX 100 kt)
11/04/12 20:00 AKST	0	

A gale force low pressure system remained in the central Gulf of Alaska at 968 MB on the morning of Saturday November 3rd as a developing storm approached from well to the SSW. By Sunday afternoon on November 4th the storm developed to hurricane force 960 MB just SW of Dixon Entrance. NCEP analyses showed extreme surface pressure gradients along Prince of Wales Island and most of the southern Panhandle. This storm rapidly dissipated by Sunday evening.

(AK-Z023) CAPE DECISION TO SALISBURY SOUND COASTAL AREA, (AK-Z025) JUNEAU BOROUGH AND NORTHERN ADMIRALTY ISLAND, (AK-Z026) INNER CHANNELS FROM KUPREANOF ISLAND TO ETOLIN ISLAND, (AK-Z027) DIXON ENTRANCE TO CAPE DECISION COASTAL AREA, (AK-Z028) SOUTHERN INNER CHANNELS

11/22/12 09:00 AKST	8K	High Wind (MAX 80 kt)
11/22/12 15:00 AKST	0	

A rapidly developing hurricane force low well to the SW on November 21st slowed down but deepened to 958 MB off Dixon Entrance on Thanksgiving Day afternoon. A strong front moved over Prince of Wales Island that evening. The high winds were brief but intense for much of SE Alaska through Thanksgiving Evening. Strong winds lasted for another day afterward.

ALASKA, Southern

(AK-Z185) EASTERN ALEUTIANS

11/01/12 13:30 AKST	0	High Wind (MAX 64 kt)
11/01/12 17:00 AKST	0	

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An intense storm moving from the North Pacific into the Gulf of Alaska combined with strong high pressure in the Bering Sea resulted in strong north wind across the Eastern Aleutians. Dutch Harbor report peak winds to 74 mph.

(AK-Z185) EASTERN ALEUTIANS

11/02/12 07:15 AKST	0	High Wind (MAX 71 kt)
11/02/12 15:00 AKST	0	

An intense storm in the Gulf of Alaska combined with strong high pressure in the Bering Sea produce strong north wind in Dutch Harbor gusting to 81 mph.

(AK-Z171) KODIAK PENINSULA

11/18/12 17:45 AKST	0	Blizzard
11/19/12 03:25 AKST	0	

(AK-Z181) ALASKA PENINSULA

11/18/12 19:45 AKST	0	High Wind (MAX 66 kt)
11/19/12 08:00 AKST	0	

An intense Gulf of Alaska storm produced snow and strong wind across Kodiak Island and high wind across the Alaska Peninsula. Blizzard conditions occurred across portions of Kodiak Island. The wind gusts peaked around 81 mph in King Cove along the Alaska Peninsula.

(AK-Z111) MATANUSKA VALLEY, (AK-Z131) NERN P.W. SND, (AK-Z135) SERN P.W. SND

11/29/12 06:30 AKST	0.15M	High Wind (MAX 83 kt)
11/30/12 21:00 AKST	0	

A strong Gulf of Alaska low coupled with deep cold arctic air and high pressure of the Alaska mainland produced the typical strong cold advection outflow gap winds along the coast. Winds peaked at 97 mph in Valdez. Strong wind in Palmer blew the roof off one house and blew over a stop light. Along with the strong wind, humidity was extremely low and the lack of snow cover resulted in extreme wild fire danger. A vehicle crash and fire spread to the grass and neighboring homes and forest. A downed power line started a fire. This required incident response from the Department of Natural Resources Forestry to extinguish the wild fires.

ARIZONA, Central and Northeast

(AZ-Z013) LITTLE COLORADO RIVER VALLEY IN NAVAJO COUNTY

11/09/12 11:25 MST	0	Dust Storm
11/09/12 13:35 MST	0	

(AZ-Z012) LITTLE COLORADO RIVER VALLEY IN COCONINO COUNTY, (AZ-Z013) LITTLE COLORADO RIVER VALLEY IN NAVAJO COUNTY

11/09/12 11:45 MST	0	High Wind (MAX 61 kt)
11/09/12 13:40 MST	0	

A deep and cold winter storm system approaching Arizona brought strong winds and blowing dust to areas northeast of major terrain features such as the Mogollon Rim and San Francisco Peaks.

ARKANSAS, Central and North Central

(AR-Z003) BOONE, (AR-Z004) MARION, (AR-Z005) BAXTER, (AR-Z006) FULTON, (AR-Z007) SHARP, (AR-Z012) NEWTON, (AR-Z013) SEARCY, (AR-Z014) STONE, (AR-Z015) IZARD, (AR-Z016) INDEPENDENCE, (AR-Z021) JOHNSON, (AR-Z022) POPE, (AR-Z023) VAN BUREN, (AR-Z024) CLEBURNE, (AR-Z025) JACKSON, (AR-Z030) LOGAN, (AR-Z031) CONWAY, (AR-Z032) FAULKNER, (AR-Z033) WHITE, (AR-Z034) WOODRUFF, (AR-Z037) SCOTT, (AR-Z038) YELL, (AR-Z039) PERRY, (AR-Z040) POLK, (AR-Z041) MONTGOMERY, (AR-Z042) GARLAND, (AR-Z043) SALINE, (AR-Z044) PULASKI, (AR-Z045) LONOKE, (AR-Z046) PRAIRIE, (AR-Z047) MONROE, (AR-Z052) PIKE, (AR-Z053) CLARK, (AR-Z054) HOT SPRING, (AR-Z055) GRANT, (AR-Z056) JEFFERSON, (AR-Z062) DALLAS

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Rain in November brought improvement in drought conditions in many parts of Arkansas. However, extreme drought lingered over

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much of western Arkansas, where rainfall was not as great. There was no exceptional drought in the state as of November 6th. This was the first time since July 10th that exceptional drought had been absent from the state.

SALINE COUNTY --- 2.5 NW HASKELL [34.53, -92.66]

11/03/12 15:37 CST	0	Hail (1.50 in)
11/03/12 15:42 CST	0	Source: Public

Hail between .75 inch and 1.50 inches in diameter fell in the Haskell area.

MONROE COUNTY --- 1.8 NE EDEN [34.89, -91.26]

11/03/12 16:15 CST	0	Hail (0.88 in)
11/03/12 16:15 CST	0	Source: Public

Hail ranged from .75 to .88 inch in diameter on Interstate 40.

PULASKI COUNTY --- 1.9 SW WOODLAND HGTS [34.76, -92.43]

11/03/12 17:43 CST	0	Hail (0.75 in)
11/03/12 17:43 CST	0	Source: Social Media

Hail fell in west Little Rock.

The arrival of a cold front triggered scattered thunderstorms on the afternoon and evening of the 3rd. Hail fell in a number of locations, but most of it was small. In only one instance was the hail large enough to be considered severe.

HOT SPRING COUNTY --- BISMARCK [34.32, -93.17]

11/05/12 15:10 CST	0	Hail (1.50 in)
11/05/12 15:15 CST	0	Source: Social Media

Hail ranging from .50 inch to 1.50 inches in diameter fell in the Bismarck area. The hail covered the ground in some places.

SALINE COUNTY --- BENTON [34.57, -92.58]

11/05/12 17:11 CST	0	Hail (0.75 in)
11/05/12 17:20 CST	0	Source: Trained Spotter

There were numerous reports of hail, ranging from .25 to .75 inch in diameter, in the Benton area. Hail covered the ground in some places.

An upper-level low pressure system touched off thunderstorms during the afternoon of the 5th. Some of the storms produced hail.

PULASKI COUNTY --- 0.4 NE LITTLE ROCK [34.73, -92.27]

11/11/12 16:30 CST	0.13M	Lightning
11/11/12 16:30 CST	0	Source: Newspaper

Lightning struck a church near downtown Little Rock. A chimney and a corner of the bell tower were knocked apart. The falling stones and bricks punched several holes in the tile roof, and rafters were split or shattered in several places. Heavy rain caused water to pour into the attic and work its way down a couple of floors into the choir loft of the sanctuary. The church's phone lines and elevator were knocked out. The church, built in 1921, is on the National Registry of Historic Places.

A line of thunderstorms, accompanying a cold front, moved across Arkansas on the afternoon and the evening of the 11th. A lightning strike caused damage to a church in Little Rock.

(AR-Z013) SEARCY

11/17/12 08:00 CST	0	Wildfire
11/18/12 21:00 CST	0	

The Snowball Fire 4 miles southeast of Snowball in Searcy County burned 308 acres on the 17th and 18th.

(AR-Z039) PERRY, (AR-Z043) SALINE

11/24/12 18:00 CST	0	Wildfire
11/25/12 17:00 CST	0	

The Round Mountain Fire began on the 24th about 3 miles southeast of Williams Junction in Perry County and burned into Saline County before being controlled on the 25th. Altogether, 330 acres burned.

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(AR-Z040) POLK				
	11/26/12 00:15 CST		0	Wildfire
	11/30/12 23:59 CST		0	

The Raspberry Mountain fire began in the Ouachita National Forest about 7.6 miles south-southwest of Big Fork in Polk County soon after midnight on the 26th. The fire burned about 220 acres during November and then continued into December.

ARKANSAS, East

(AR-Z008) RANDOLPH, (AR-Z009) CLAY, (AR-Z017) LAWRENCE, (AR-Z018) GREENE, (AR-Z026) CRAIGHEAD, (AR-Z027) POINSETT, (AR-Z028) MISSISSIPPI, (AR-Z035) CROSS, (AR-Z036) CRITTENDEN, (AR-Z048) ST. FRANCIS, (AR-Z049) LEE				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

Beneficial rain during the month of November improved drought conditions across Eastern Arkansas. In fact, severe (D2) drought conditions improved to moderate (D1) conditions everywhere except Randolph County where severe (D2) conditions continued. Lake and river levels improved due to the rainfall.

ST. FRANCIS COUNTY --- WHEATLEY [34.92, -91.10]

11/03/12 15:48 CST	0	Hail (0.88 in)
11/03/12 15:53 CST	0	Source: Trained Spotter

ST. FRANCIS COUNTY --- 1.8 ENE WOOD SPUR [34.96, -90.94], 1.6 WNW PALESTINE [34.98, -90.90]

11/03/12 15:55 CST	0	Hail (1.00 in)
11/03/12 16:13 CST	0	Source: Trained Spotter

Nickel to quarter size hail fell in the vicinity of Palestine.

CRITTENDEN COUNTY --- WEST MEMPHIS [35.15, -90.18]

11/03/12 16:03 CST	0	Hail (0.88 in)
11/03/12 16:08 CST	0	Source: Law Enforcement

A cold front moved through the Mid-South during the afternoon hours of November 3rd. Showers and thunderstorms developed as the front approached Interstate 40 and interacted with an increasingly moist and unstable airmass. A few of the storms produced large hail.

ARKANSAS, Northwest

(AR-Z001) BENTON, (AR-Z002) CARROLL, (AR-Z010) WASHINGTON, (AR-Z011) MADISON, (AR-Z019) CRAWFORD, (AR-Z020) FRANKLIN, (AR-Z029) SEBASTIAN				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

November 2012 was extremely dry across all of northwestern Arkansas. In fact, the entire region received less than 25 percent of its normal average precipitation for the month and portions of west central Arkansas received less than 10 percent of normal precipitation. Fort Smith experienced its second driest November on record in 2012, only receiving 0.29 inches of precipitation. As a result of this continued dry weather, severe (D2) to extreme (D3) drought conditions persisted across the region during the month. Monetary damage estimates resulting from the drought were not available.

ARKANSAS, Southwest

(AR-Z050) SEVIER, (AR-Z051) HOWARD, (AR-Z059) LITTLE RIVER, (AR-Z060) HEMPSTEAD, (AR-Z070) MILLER

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The month of November continued where October left off concerning the ongoing drought conditions across portions of Southwest Arkansas. The counties that continued to suffer through D2 Severe and D3 Extreme Drought conditions through the month of November

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were Howard, Little River and Sevier, Hempstead and Miller Counties.

The following are a few selected cities across Southwest Arkansas with their November rainfall totals and departures from normal as well as their 2012 rainfall totals and departures from normal.

Texarkana November rainfall was 1.05". The departure from normal was -3.77".
 Texarkana yearly rainfall was 27.61". The departure from normal was -16.99".
 Dequeen November rainfall was 0.61". The departure from normal was -4.30".
 Dequeen yearly rainfall was 24.69". The departure from normal was -19.94".

HOWARD COUNTY --- 0.7 N NASHVILLE [33.94, -93.85]

11/11/12 14:05 CST	25K	Thunderstorm Wind (EG 54 kt)
11/11/12 14:05 CST	0	Source: Law Enforcement

A large tree limb fell through the bedroom of a home in Nashville, Arkansas. There were no reports of any injuries.

MILLER COUNTY --- 2.2 SW ARTEX [33.36, -93.86]

11/11/12 16:10 CST	0	Thunderstorm Wind (EG 53 kt)
11/11/12 16:10 CST	0	Source: Law Enforcement

A tree was downed along CR. 13 near Genoa, Arkansas.

MILLER COUNTY --- 0.7 S BRIGHTSTAR [33.11, -94.00]

11/11/12 16:35 CST	0	Thunderstorm Wind (EG 53 kt)
11/11/12 16:35 CST	0	Source: Law Enforcement

Trees were downed in the community of Bright Star, Arkansas.

LAFAYETTE COUNTY --- 2.9 E KIZER [33.07, -93.62]

11/11/12 17:20 CST	0	Thunderstorm Wind (EG 54 kt)
11/11/12 17:20 CST	0	Source: Law Enforcement

A tree was downed on County Road southeast of Bradley, Arkansas.

A potent upper level trough moved across the Central Plains, pushing a strong cold front across North Texas and Central Oklahoma and through the Four State Region. Storms began developing ahead of the front along a pre-frontal trough axis across parts of East Texas and slowly propagated eastward. The front eventually merged with the pre-frontal trough, as the storms intensified and continued to push across the area.

ATLANTIC NORTH

CP CHARLES LT VA TO NC-VA BDR OUT 20NM COUNTY --- CAPE HENRY [36.92, -76.00]

11/13/12 09:24 EST	1K	Marine Strong Wind (MG 40 kt)
11/13/12 09:24 EST	0	Source: C-MAN Station

Wind gust of 40 knots was measured at Cape Henry.

CHESAPEAKE BAY FROM LITTLE CREEK, VA, TO CAPE HENRY, VA, INCLUDING THE CHESAPEAKE BAY BRIDGE TUNNEL COUNTY --- CHESAPEAKE BAY BRIDGE TUNNEL 3RD ISLAND [37.04, -76.08]

11/13/12 10:05 EST	1K	Marine Strong Wind (MG 41 kt)
11/13/12 10:05 EST	0	Source: C-MAN Station

Wind gust of 41 knots was measured at Chesapeake Bay Bridge Tunnel 3rd Island.

Gusty north winds occurred behind a cold front across portions of the Chesapeake Bay and Virginia Coastal Waters.

ATLANTIC SOUTH

CHARLESTON HARBOR COUNTY --- CHARLESTON HRBR ENT [32.75, -79.87]

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	11/04/12 18:55 EST		0	Marine Thunderstorm Wind (MG 36 kt)
	11/04/12 18:56 EST		0	Source: Mesonet

At 36 knot wind gust was measured at Fort Sumter.

Within a warm sector south and southeast of a surface low pressure system and an associated cold front, thunderstorms fired along pre-frontal mesoscale boundaries early in the afternoon and advanced east across the forecast area through the evening, eventually reaching the coast. A combination of parameters supported multi-cell convection and a few severe thunderstorms damaging wind gusts and quarter sized hail.

DEERFIELD BEACH TO OCEAN REEF FL COUNTY --- 7.0 NE PORT EVERGLADES [26.18, -80.06]

11/17/12 08:15 EST	0	Waterspout
11/17/12 08:30 EST	0	Source: Trained Spotter

A trained spotter reported a waterspout 5 miles southeast of Pompano Beach. Showers associated with the waterspout were nearly stationary.

JUPITER INLET TO DEERFIELD BEACH FL OUT 20NM COUNTY --- 13.8 SSE PORT OF PALM BEACH [26.55, -80.02]

11/17/12 17:15 EST	0	Waterspout
11/17/12 17:25 EST	0	Source: Trained Spotter

A waterspout was observed just offshore Hypoluxo and was nearly stationary.

A weak stalled frontal boundary was located across South Florida causing a few showers to develop over the Atlantic waters east of the peninsula.

DEERFIELD BEACH TO OCEAN REEF FL 20 TO 60NM COUNTY --- 25.0 E MIAMI BEACH [25.80, -79.72], 29.8 E MIAMI BEACH [25.88, -79.65]

11/21/12 16:10 EST	0	Waterspout
11/21/12 16:30 EST	0	Source: Airplane Pilot

A waterspout was observed by a pilot about 30 miles east of Miami.

Showers developed over the offshore Atlantic waters ahead of a cold front moving down the Florida peninsula.

CALIFORNIA, North Central

(CA-Z069) WEST SLOPE NORTHERN SIERRA NEVADA

11/17/12 16:00 PST	0	Winter Weather
11/18/12 16:00 PST	0	

A weak winter storm from the Gulf of Alaska brushed through Northern California Saturday night through Sunday morning and dropped between 2-12 inches of snow for the highest elevations. Many ski resorts only reported between 2-12 inches but SNOTEL sites reported up to 12 inches of snow depth.

TEHAMA COUNTY --- 2.2 S TEHAMA [39.99, -122.13], 2.3 E RICHFIELD [39.98, -122.13], 2.4 S TEHAMA [39.99, -122.12], 2.2 S TEHAMA [39.99, -122.12]

11/21/12 02:00 PST	5K	Flash Flood (due to Heavy Rain)
11/21/12 10:00 PST	0	Source: Trained Spotter

Several hours of heavy rainfall from training storms caused local flooding in low-lying areas in Shasta County and parts of north Tehama County. Redding airport received approximately 1.75 inches of rain from 10am Nov. 20 to 10am Nov. 21st, but approximately 1.25 inches of that occurred from 2am-10am Nov 21st. Shasta Dam received approximately 3.50 to 4 inches of rain in that 24 hour period. The Corning area received approximately 0.37 inches. KRCR reported flash flooding at Hall Road along Thomes Creek where the creek rose significantly and flooded the low-lying area. At approximately 815am, a man from a vehicle had to be rescued by a CalFire helicopter as the car became mostly submerged in rushing water after driving across Hall Rd that was water-covered from the swollen creek water. The rushing water swept his vehicle. Other areas nearby were reported to have ponding of water on the roads.

Heavy rain bands formed in a convergence zone in central Shasta County near the Redding and Shasta Lake area for several hours. The region was already saturated from previous rainfall and training storms caused significant amounts of rainfall the morning of Wednesday, November 21st and flooding in low-lying areas.

(CA-Z068) MT SHASTA/WESTERN PLUMAS COUNTY, (CA-Z069) WEST SLOPE NORTHERN SIERRA NEVADA

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	11/28/12 09:00 PST		0	Winter Weather
	11/30/12 23:59 PST		0	

A warm atmospheric river event began early Wednesday, November 28th with an initial wave of rain and snow at higher elevations above 6500 ft. A second wave came through Thursday evening, November 29th through Friday, November 30th, bringing heavier rain and more snow to the highest elevations above 7000 ft. The third wave came through Saturday evening December 1st through Sunday, December 2nd, bringing periods of moderate to heavy rainfall, flooding from overly saturated grounds and high river/stream water levels, and snow above 7000 ft. Windy conditions persisted through the event, especially Wednesday through Saturday, causing trees and tree branches to fall down and widespread power outages affecting over approximately 10K people. Winds were reported to reach as high as 60-70 mph in the valley/foothill region, and over 100 mph in the mountains.

CALIFORNIA, Northeast

(CA-Z071) LASSEN/EASTERN PLUMAS/EASTERN SIERRA

11/08/12 10:00 PST	0	Heavy Snow
11/09/12 10:00 PST	0	

A cold trough dropped along the Pacific Northwest coast on the 8th and into northern California and the interior Northwest on the 9th. The trough brought a narrow band of heavy snow to portions of northeast California on the 8th and 9th.

(CA-Z071) LASSEN/EASTERN PLUMAS/EASTERN SIERRA

11/21/12 01:30 PST	0	High Wind (MAX 74 kt)
11/21/12 09:00 PST	0	

Low pressure moved into the Pacific Northwest on the 21st. Only light precipitation fell over northeast California, however winds were strong from early to mid morning on the 21st over portions of Lassen County.

(CA-Z072) GREATER LAKE TAHOE AREA, (CA-Z073) MONO

11/29/12 22:00 PST	0	Winter Weather
11/30/12 16:00 PST	0	

Low pressure remained over the northeast Pacific from November 29th through December 2nd, bringing high elevation snowfall and heavy lower elevation rainfall.

CALIFORNIA, South Central

(CA-Z096) S SIERRA MTNS, (CA-Z097) TULARE CTY MTNS

11/08/12 12:00 PST	0	Winter Storm
11/10/12 08:00 PST	0	

TULARE COUNTY --- 1.2 WSW OCTOL [36.11, -119.29], 1.1 SW OCTOL [36.11, -119.28]

11/09/12 12:55 PST	0	Tornado (EF0, L: 0.27 mi , W: 30 yd)
11/09/12 12:58 PST	0	Source: Broadcast Media

Report on the weak tornado that occurred south of Tulare on November 9th.

Here are the storm survey results of the tornado. The location was between Tulare and Tipton near the Intersection of avenue 176 and road 128. Tornado lasted for about 3 minutes and did not interact with any private property or buildings. Some branches and corn husks were strewn about. Several eyewitness accounts corroborated a video provided by local media. The tornado path included several utility poles that were not damaged.

The eyewitness video courtesy of KMPH Channel 26 is available on our website.

Wind speed estimate: 65 mph

This was the 86th confirmed tornado in the central California Interior since 1950...and the 13th to strike Tulare county. The last Tornado in Tulare county was on January 27th 2008...when an ef0 touched down 1 mile east of Goshen junction. The most recent tornado in the central California interior occurred on march 17th 2012 when

An ef0 tornado touched down 4 miles southwest of tranquility in Fresno County.

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(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY, (CA-Z098) INDIAN WELLS VLY, (CA-Z099) SE KERN CTY DESERT				
	11/11/12 02:00 PST		0	Frost/Freeze
	11/12/12 08:00 PST		0	

An upper-level ridge was over California at the start of November, creating a stable environment across the central California interior. Fresno tied its record high minimum temperature for the 2nd of 56 degrees, last set in 1941. Areas of fog developed in the central and southern San Joaquin Valley during the morning of November 3rd, but considerably less fog formed the next day.

The ridge remained over California through the 7th, then gave way to an approaching upper-level low. Light showers developed over the Tehachapi Mountains during the late morning of November 8th, as subtropical moisture moved into Kern County and collided with a cold front dropping south through the San Joaquin Valley. This set up a convergence zone over the Tehachapi Mountains that triggered the convection.

Heavy snow showers also occurred in the Southern Sierra Nevada, where up to one foot of new snow fell on November 8th. This was a significant impact to the mountain regions since quite a bit of mountain recreation was still going on at this time.

After this system moved through, As a result, the air remained moisture laden. A weak short-wave ridge moved over California during the night of November 8th-9th, but this was enough to trigger dense fog development over much of Kings County as well as southern Fresno and western Tulare Counties.

Thunderstorms developed during the afternoon of November 9th. One of these thunderstorms triggered a weak tornado (rated EF0), that touched down 4 miles north northeast of Tipton at 12:55 PM PST. No damage was reported. This was the 86th tornado to touch down in the WFO Hanford's seven-county warning/forecast area since records began in the 1950's, and was the 13th to touch down in Tulare County. Other thunderstorms dropped pea-sized hail on northern Hanford. In the Southern Sierra Nevada, several inches of snow fell above 6000 feet, and a couple of inches of snow fell on the floor of Yosemite Valley.

In the wake of this storm, an unseasonably cold airmass settled over the central California interior. Low temperatures fell below freezing across parts of the central and southern San Joaquin Valley on the morning of November 11th and 12th, and the Kern County deserts had their first hard freeze of the season.



Small short lived tornado south of Tulare on November 9, 2012. Image courtesy KMPH TV.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(CA-Z096) S SIERRA MTNS				
	11/16/12 10:00 PST		0	Winter Storm
	11/18/12 10:00 PST		0	
(CA-Z097) TULARE CTY MTNS				
	11/16/12 10:00 PST		0	Winter Weather
	11/18/12 10:00 PST		0	
MADERA COUNTY --- 0.3 SW BORDEN [36.93, -120.03], 0.9 SSE BORDEN [36.92, -120.03], 1.5 ESE BORDEN [36.92, -120.01], 0.8 ENE BORDEN [36.93, -120.02]				
	11/17/12 16:50 PST		0	Flood (due to Heavy Rain)
	11/17/12 17:50 PST		0	Source: Law Enforcement
FRESNO COUNTY --- 3.8 E FRIANT [36.99, -119.65], 3.9 E FRIANT [36.98, -119.65], 4.7 SW MARSHALL STATION [36.98, -119.64], 4.1 SW MARSHALL STATION [36.99, -119.63]				
	11/17/12 19:06 PST		0	Flood (due to Heavy Rain)
	11/17/12 19:45 PST		0	Source: Law Enforcement
<p>An upper-level low drew subtropical moisture over the southern half of California beginning November 15th. This warm, moist airmass kept overnight low several degrees above normal. The low at Fresno on the 16th was 58 degrees, tying the record high minimum temperature for the date, last set in 1965. The low at Fresno the next day also was 58 degrees. This broke the record high minimum temperature for November 17th by one degree. The old record had also been set in 1965.</p> <p>Showers developed over the region on November 17th, as well as a few thunderstorms. One thunderstorm that formed over Madera County lasted for almost three hours as it slowly moved northeast across the county and into the Sierra Nevada foothills. Another thunderstorm dropped heavy rain on Merced County. In the Southern Sierra Nevada, snowfall amounts generally were less than 6 inches, although a couple of sites near the crest reported storm totals around a foot. The cold front that triggered these storms weakened rapidly southward, but sporadic light showers continued across the central California interior into the morning of November 18th.</p>				
(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z090) E CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY, (CA-Z092) SE S.J. VALLEY				
	11/23/12 00:00 PST		0.30M	Dense Fog
	11/27/12 10:00 PST		0	
<p>A weak upper-level disturbance brushed the northern fringes of the WFO Hanford warning/ forecast area on November 20th-21st. This disturbance brought 0.21 inch of rain to Yosemite Valley, with only around a hundredth as far south as Shaver Lake and into the Southern Sierra Nevada foothills near Mariposa and Oakhurst. On the San Joaquin Valley floor, no measurable rain was reported. The Merced Regional Airport did report a trace of rain, and this was the southern extent of the Valley rain from this storm.</p> <p>Despite the lack of rainfall from the storm on November 20th-21st on the San Joaquin Valley floor, patchy dense fog developed during the morning of the 22nd. Initially the fog formed in the Los Banos area, but this patch of fog eroded from the north. Later, a larger patch of fog developed in the Reedley-Visalia area, and then spread northward and westward, lingering through much of the morning. At the same time, clouds banked up over the south end of the San Joaquin Valley. The combination of low clouds and fog kept central and south Valley highs in the lower to mid 60s, except for the Madera Regional Airport which only had a high of 58 degrees.</p> <p>Dense fog redeveloped in the central and southern San Joaquin Valley during the evening of November 22nd, forming a ribbon along the Highway 99 corridor. This narrow band of fog drifted over the Valley floor, causing visibilities at most airports to fluctuate from near zero to a couple of miles. The fog became more widespread toward daybreak, persisting through the late morning of November 23rd.</p> <p>The 24th saw fog develop later in the night, mainly after midnight. The fog lasted through daybreak, then began to lift by 8 AM in some locations; the fog had completely dissipated by 11 AM.</p> <p>Widespread dense fog continued through November 27th across most of the San Joaquin Valley. On the morning of the 27th, dense fog contributed to a chain reaction crash involving two big rigs and one vehicle. Three people were killed in this crash. The crash occurred on Highway 152 about two miles south of Chowchilla.</p>				
(CA-Z089) W CENTRAL S.J. VALLEY, (CA-Z091) SW S.J. VALLEY				
	11/28/12 00:00 PST		10K	Strong Wind (MAX 43 kt)
	11/28/12 14:00 PST		0	
MARIPOSA COUNTY --- 1.3 ESE NORTH WAWONA [37.54, -119.63]				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/30/12 11:51 PST		0	Heavy Rain
	11/30/12 11:51 PST		0	Source: Mesonet

Twenty four hour rainfall total at Wawona was 3.06 inches.

MARIPOSA COUNTY --- 1.3 WSW YOSEMITE VLG [37.74, -119.60]

11/30/12 12:00 PST	0	Heavy Rain
11/30/12 12:00 PST	0	Source: Mesonet

Twenty four hour rainfall total at Happy Isles in Yosemite Park was 2.59 inches.

MERCED COUNTY --- 2.1 SE ARENA [37.35, -120.64], 1.7 SW ATWATER MUNI ARPT [37.31, -120.62], 1.0 NW FERGUS [37.34, -120.56], 1.2 NW ATWATER [37.36, -120.62]

11/30/12 12:46 PST	0.12M	Flood (due to Heavy Rain)
11/30/12 13:46 PST	0	Source: Law Enforcement

California highway patrol reported a multi-vehicle accident in heavy rain on highway 99 at west side boulevard. Involved 3 cars and a big rig. Number of injuries unknown at this time.

FRESNO COUNTY --- 4.4 W SILVER CREEK [36.73, -120.48]

11/30/12 13:27 PST	0	Heavy Rain
11/30/12 13:27 PST	0	Source: Mesonet

Twenty four hour rainfall total at Mendota was 0.86 inches.

MARIPOSA COUNTY --- 1.3 ESE NORTH WAWONA [37.54, -119.63]

11/30/12 13:51 PST	0	Heavy Rain
11/30/12 13:51 PST	0	Source: Mesonet

Twenty four hour rainfall total at Wawona was 3.98 inches.

FRESNO COUNTY --- 1.4 N FIGARDEN [36.84, -119.87], 1.0 N FIGARDEN [36.83, -119.87], 1.1 NNE FIGARDEN [36.83, -119.86], 1.5 NNE FIGARDEN [36.84, -119.86]

11/30/12 14:00 PST	0	Flood (due to Heavy Rain)
11/30/12 15:00 PST	0	Source: NWS Employee

Street flooding was reported at Brawley and Herndon on Fresno's north side.

MARIPOSA COUNTY --- 1.5 NNW MARIPOSA [37.50, -119.98], 2.1 SE MARIPOSA AIRPORT [37.50, -120.00], 0.4 WNW MARIPOSA [37.48, -119.98], 1.4 N MORMON BAR [37.49, -119.95]

11/30/12 15:07 PST	25K	Flood (due to Heavy Rain)
11/30/12 17:07 PST	0	Source: Law Enforcement

The Highway Patrol had to close Highway 49 due to flooding.

MADERA COUNTY --- 6.7 ENE TRIGO [36.94, -119.83], 7.3 WSW INDIAN SPGS [36.99, -119.84], 3.9 SSW INDIAN SPGS [37.00, -119.75], 7.6 S INDIAN SPGS [36.94, -119.75]

11/30/12 15:09 PST	25K	Flood (due to Heavy Rain)
11/30/12 17:09 PST	0	Source: Law Enforcement

The Highway Patrol reported flooding and road closure of Highway 41 at Avenue 15.

MARIPOSA COUNTY --- 1.5 NNW DARRAH [37.54, -119.84]

11/30/12 15:47 PST	0	Heavy Rain
11/30/12 15:47 PST	0	Source: Mesonet

Twenty four hour rainfall total at Mariposa was 3.61 inches.

MARIPOSA COUNTY --- 1.3 ESE NORTH WAWONA [37.54, -119.63]

11/30/12 15:51 PST	0	Heavy Rain
11/30/12 15:51 PST	0	Source: Mesonet

Twenty four hour rainfall total at Wawona was 4.56 inches.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MARIPOSA COUNTY --- 1.3 ENE ELLIOTT CORNER [37.48, -119.75], 16.1 SSE ELLIOTT CORNER [37.25, -119.68], 8.7 SSE FISH CAMP [37.37, -119.56], 4.9 SE FISH CAMP [37.43, -119.57]				

11/30/12 16:00 PST	25K	Flood (due to Heavy Rain)
11/30/12 18:00 PST	0	Source: Trained Spotter

A trained weather spotter reported street flooding that backed up into a home.

TUOLUMNE COUNTY --- 7.3 SE HARDEN FLATS [37.76, -119.82]			
11/30/12 16:14 PST	0	Heavy Rain	
11/30/12 16:14 PST	0	Source: Mesonet	

Twenty four hour rainfall total at Tuolumne Meadows was 3.70 inches.

FRESNO COUNTY --- 15.0 NE CLOVIS [36.97, -119.51], 2.3 SSE MARSHALL STATION [36.99, -119.56], 1.6 WNW PRATHER [37.04, -119.55], 2.2 E PRATHER [37.03, -119.48]			
11/30/12 16:28 PST	35K	Flood (due to Heavy Rain)	
11/30/12 18:28 PST	0	Source: Law Enforcement	

Law enforcement reported a rock and mud slide on Highway 168 about 15 miles northeast of Clovis, which closed the road for several hours while authorities cleaned up the debris.

The stable weather pattern continued through November 27th. The first in a series of east-Pacific storms approached the northern part of the central California interior that evening. These storms tapped into a long fetch of subtropical moisture, with resulting high snow levels through the first day of December.

While the first storm brought between a tenth and a quarter inch of rain to much of the central and southern San Joaquin Valley—north of Bakersfield—it was the second storm that brought significant rainfall to the central California interior. Fresno had a record rainfall on November 30th of 0.62 inch; the old record was 0.50 inch, set in 1982. In the Southern Sierra Nevada, new snowfall amounts ranged from 8 to 18 inches above the 9,000 foot level. The Sierra foothills saw heavy rain, with amounts around 4 inches in some spots. As a result of the heavy rainfall, some rock and mud slides occurred as the heavy rains weakened the soil. There were also several reports of flooded roads in Merced, Mariposa, Madera, and Fresno Counties.

Bakersfield and the far south end of the San Joaquin Valley remain rain shadowed. Meadows Field recorded only 0.02 inch of rain from each of the first two storm, as the storm track stayed mainly north of Kern County.

The combination of clouds and the warm subtropical airmass also kept low temperatures unseasonably warm. Both Bakersfield and Fresno set record high minimum temperatures on the last day of the month. Both cities had above-normal average temperatures, and Fresno had its sixth warmest November on record. This was also the fourth consecutive month that Fresno ranked in the top 10 warmest months. August and September 2012 were the warmest months, respectively, on record, and October 2012 was the eighth warmest October on record. Temperature records for Fresno began on August 16th, 1887.

CALIFORNIA, Southeast

(CA-Z520) OWENS VALLEY			
	11/08/12 17:42 PST	0	High Wind (MAX 56 kt)
	11/08/12 21:42 PST	0	

A strong Pacific low pressure system and cold front brought scattered high winds to the Mojave Desert and Owens Valley.

(CA-Z520) OWENS VALLEY			
	11/30/12 04:42 PST	0	High Wind (MAX 69 kt)
	11/30/12 10:00 PST	0	

INYO COUNTY --- 2.5 SSE ABERDEEN [36.95, -118.23], 10.0 N INDEPENDENCE [36.94, -118.20]			
11/30/12 12:45 PST	0	Tornado (EF0, L: 1.64 mi , W: 100 yd)	
11/30/12 12:55 PST	0	Source: Law Enforcement	

The California Highway Patrol observed and photographed a landspout near Highway 395 north of Independence. No damage was reported.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A Pacific storm system brought locally high winds to the Mojave Desert.

CALIFORNIA, Southwest

(CA-Z055) SAN BERNARDINO COUNTY MOUNTAINS

11/05/12 10:55 PST	4K	Wildfire
11/06/12 18:30 PST	0	

A wildfire of unknown cause started at 1055 PST, Monday, Nov. 5, 2012 on the east side of Interstate 15, northeast of the I-15/215 merge, in the Pitman Canyon area. The fire initially burned downwind/downhill in a south southeast direction. A spot fire started on the west side of the freeway and rapidly burned uphill. The Matthews Ranch area was evacuated. No homes were damaged, but a shipping container was destroyed, along with some of the guardrails along I-15. Interstate 15, between the Cajon Pass and the I-15/I-215 merge was closed in both directions all afternoon, reopening on the 6th, except for the slow lanes which remained closed for guardrail repair. Two firefighters sustained unknown injuries while battling the blaze. The fire burned 375 acres before being fully contained at 1830 PST on the 6th.

(CA-Z058) SAN DIEGO COUNTY MOUNTAINS, (CA-Z061) COACHELLA VALLEY

11/08/12 01:00 PST	0	High Wind (MAX 70 kt)
11/09/12 15:00 PST	0	

SAN BERNARDINO COUNTY --- 3.0 S CRESTLINE [34.19, -117.30], 0.8 WSW CRESTLINE [34.22, -117.31], 1.8 ESE CRESTLINE [34.22, -117.27], 0.7 ESE ARROWHEAD SPGS [34.18, -117.26]

11/09/12 02:00 PST	0	Debris Flow
11/09/12 03:30 PST	0	Source: Law Enforcement

CHP reported boulders the size of beer kegs across both lanes of state route 18 near Upper Waterman Canyon.

A cold low pressure system from the Gulf of Alaska moved through California, bringing light to moderate precipitation. A few locations in the San Diego County and San Bernardino County Mountains received between 1 and 2 inches of rain. One of these locations experienced a debris flow along State Route 18, in the upper Waterman Canyon just south of Crestline, where boulders the size of beer kegs washed across both lanes of the highway. Strong and gusty west to northwest winds accompanied this system, with several mountain and desert slope stations reporting sustained winds over 45 mph and gusts to 80 mph.

(CA-Z042) ORANGE COUNTY COASTAL AREAS, (CA-Z043) SAN DIEGO COUNTY COASTAL AREAS

11/23/12 00:30 PST	0	Dense Fog
11/25/12 10:00 PST	0	

Clear skies, high humidity just inland from the coast, along with the radiational cooling allowed dense fog to form near the coast during the nights and early mornings of the 23rd and 25th. Drainage flow kept the fog within about 10 miles of the coast, with the exception of the inland, low area of Ramona. Multiple airports reported visibilities less than 1/4 mile for several hours on each of those mornings. The fog created some airport delays as well as security problems for the Border Patrol along the Mexican Border and along the coast up to San Clemente.

(CA-Z042) ORANGE COUNTY COASTAL AREAS, (CA-Z043) SAN DIEGO COUNTY COASTAL AREAS

11/30/12 06:00 PST	0	High Surf
11/30/12 16:00 PST	0	

A strong, Pacific low pressure system generated a large WNW swell of 8 to 10 feet around 14 seconds. This produced high surf conditions along the west-facing San Diego and Orange County beaches. Average surf heights were 5-8 feet with sets to 12 feet in some areas. This surf contributed to severe beach erosion at Moonlight Beach in Encinitas. Erosion of up to 4 feet has erased a large portion of the sand replacement project previously in place.

CALIFORNIA, Upper

(CA-Z081) CENTRAL SISKIYOU COUNTY, (CA-Z083) NORTH CENTRAL & SOUTHEAST SISKIYOU COUNTY, (CA-Z085) MODOC COUNTY

11/18/12 15:03 PST	0	High Wind (MAX 76 kt)
11/21/12 00:03 PST	0	

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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After a stretch of quiet weather, several incoming fronts brought high winds to portions of southern Oregon.

(CA-Z082) SOUTH CENTRAL SISKIYOU COUNTY, (CA-Z083) NORTH CENTRAL & SOUTHEAST SISKIYOU COUNTY

11/28/12 08:00 PST	0	Heavy Snow
11/29/12 13:00 PST	0	

An incoming front brought heavy snow to elevations above 5000 feet in northern California.

(CA-Z083) NORTH CENTRAL & SOUTHEAST SISKIYOU COUNTY, (CA-Z085) MODOC COUNTY

11/28/12 08:45 PST	0	High Wind (MAX 76 kt)
11/30/12 01:03 PST	0	

Another strong cold front brought high winds to parts of northern California.

(CA-Z081) CENTRAL SISKIYOU COUNTY

11/30/12 20:55 PST	0	High Wind (MAX 55 kt)
11/30/12 23:10 PST	0	

An incoming cold front brought a brief period of high winds to the Shasta Valley.

CALIFORNIA, Western

MARIN COUNTY --- 0.7 NNE FAIRFAX [37.99, -122.58]

11/17/12 00:00 PST	0	Heavy Rain
11/17/12 00:00 PST	0	Source: Newspaper

Heavy rain led to two small sewage spills into creeks in the Ross Valley. More than 3,000 gallons spilled into the Sleepy Hollow Creek near Willow Way in San Anselmo. 1,000 gallons of sewage spilled into Fairfax Creek on Steven Court in Fairfax.

One of the first winter storms of the season brought moderate rainfall amounts to the area on November 17. Only minor impacts were reported.

(CA-Z505) COASTAL NORTH BAY INCLUDING POINT REYES NATIONAL SEASHORE, (CA-Z509) SAN FRANCISCO PENINSULA COAST, (CA-Z511) EAST BAY HILLS AND THE DIABLO RANGE, (CA-Z512) SANTA CRUZ MOUNTAINS, (CA-Z530) SOUTHERN MONTEREY BAY AND BIG SUR COAST

11/28/12 08:49 PST	1K	High Wind (MAX 73 kt)
11/30/12 04:18 PST	0	

(CA-Z006) SAN FRANCISCO, (CA-Z505) COASTAL NORTH BAY INCLUDING POINT REYES NATIONAL SEASHORE, (CA-Z506) NORTH BAY INTERIOR VALLEYS, (CA-Z508) SAN FRANCISCO BAY SHORELINE, (CA-Z512) SANTA CRUZ MOUNTAINS, (CA-Z517) SANTA LUCIA MOUNTAINS AND LOS PADRES NATIONAL FOREST, (CA-Z529) NORTHERN MONTEREY BAY

11/28/12 09:06 PST	61.10K	Strong Wind (MAX 49 kt)
11/30/12 12:00 PST	0	

NAPA COUNTY --- 1.0 N OAK KNOLL [38.39, -122.35], 0.9 N OAK KNOLL [38.39, -122.35], 0.9 N OAK KNOLL [38.39, -122.35], 0.9 N OAK KNOLL [38.39, -122.35]

11/30/12 05:00 PST	0.50K	Flood (due to Heavy Rain)
11/30/12 06:00 PST	0	Source: Newspaper

Hopper Creek flooded residential streets beginning around 5 AM with the water subsiding after the rains ended later Friday morning.

NAPA COUNTY --- 2.8 ENE RUTHERFORD [38.48, -122.37]

11/30/12 05:18 PST	0	Heavy Rain
11/30/12 05:18 PST	0	Source: Official NWS Observations

Observations at Conn Dam measured heavy rainfall. Minor urban and small stream flooding was observed across Napa County due to the heavy rainfall.

SONOMA COUNTY --- 6.2 S SKAGGS SPGS [38.61, -123.02]

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/30/12 05:46 PST		0	Heavy Rain
	11/30/12 05:46 PST		0	Source: Mesonet

Observations measured heavy rainfall. Minor urban and small stream flooding was observed across Sonoma County due to the heavy rainfall.

SANTA CLARA COUNTY --- 1.3 WNW MONTALVO [37.24, -122.04]

11/30/12 07:12 PST	0	Heavy Rain
11/30/12 07:12 PST	0	Source: Mesonet

Observations at 2020 feet elevation measured heavy rainfall. Minor urban and small stream flooding was observed across Santa Clara County due to the heavy rainfall.

SANTA CRUZ COUNTY --- 0.6 E FOREST PARK [37.13, -122.12]

11/30/12 07:12 PST	0	Heavy Rain
11/30/12 07:12 PST	0	Source: Mesonet

Observations at 479 feet elevation measured heavy rainfall. Minor urban and small stream flooding was observed across Santa Cruz County due to the heavy rainfall.

MONTEREY COUNTY --- 7.8 SSE LUCIA [36.06, -121.52]

11/30/12 07:34 PST	0	Heavy Rain
11/30/12 07:34 PST	0	Source: Mesonet

Observations at 3288 feet elevation measured heavy rainfall. Minor urban and small stream flooding was observed across Monterey County due to the heavy rainfall.

ALAMEDA COUNTY --- 0.8 NNW NILES [37.59, -121.96], 0.8 NW NILES [37.59, -121.96], 0.7 NW NILES [37.59, -121.96], 0.8 NNW NILES [37.59, -121.96]

11/30/12 08:00 PST	1K	Debris Flow
11/30/12 08:00 PST	0	Source: Newspaper

Following heavy rain on November 30, a mudslide shut down portions of Highway 84, Niles Canyon Road, to the east of Fremont. The California Highway Patrol closed the road due to the mudslide.

NAPA COUNTY --- 0.5 W ANGWIN [38.57, -122.44]

11/30/12 08:30 PST	0	Heavy Rain
11/30/12 08:30 PST	0	Source: Mesonet

Observations at 1715 feet elevation measured heavy rainfall. Minor urban and small stream flooding was observed across Napa County due to the heavy rainfall.

MONTEREY COUNTY --- 5.2 WNW LUCIA [36.19, -121.64]

11/30/12 09:31 PST	0	Heavy Rain
11/30/12 09:31 PST	0	Source: Mesonet

Observations at 3368 feet elevation measured heavy rainfall. Minor urban and small stream flooding was observed across Monterey County due to the heavy rainfall.

MONTEREY COUNTY --- 7.8 SSE LUCIA [36.06, -121.52]

11/30/12 09:31 PST	0	Heavy Rain
11/30/12 09:31 PST	0	Source: Mesonet

Observations at 3288 feet elevation measured heavy rainfall. Minor urban and small stream flooding was observed across Monterey County due to the heavy rainfall.

SANTA CLARA COUNTY --- 3.9 E HOLY CITY [37.16, -121.90]

11/30/12 09:45 PST	0	Heavy Rain
11/30/12 09:45 PST	0	Source: Mesonet

Observations at 3400 feet elevation measured heavy rainfall. Minor urban and small stream flooding was observed across Santa Clara County due to the heavy rainfall.

NAPA COUNTY --- 2.3 ENE RUTHERFORD [38.48, -122.38]

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/30/12 09:53 PST		0	Heavy Rain
	11/30/12 09:53 PST		0	Source: Mesonet
Heavy rainfall measured at Conn Dam. Minor flooding of urban areas and small streams was observed across Napa County during this event.				
MONTEREY COUNTY --- 1.7 E NOTLEYS LNDG [36.40, -121.87], 2.0 E NOTLEYS LNDG [36.40, -121.86], 1.9 E NOTLEYS LNDG [36.40, -121.87], 1.7 E NOTLEYS LNDG [36.40, -121.87]				
	11/30/12 10:25 PST		0.50K	Flash Flood (due to Heavy Rain)
	11/30/12 11:00 PST		0	Source: CoCoRaHS
A CoCoRaHS spotter reports 3.50 inches of rain since 700 AM PST with a storm total of 4.88 inches. The spotter observed overwhelmed drainage culverts along the road that were backing up with significant erosion being reported.				
SANTA CRUZ COUNTY --- 0.4 W SOQUEL [36.98, -121.96], 0.4 W SOQUEL [36.98, -121.96], 0.4 W SOQUEL [36.98, -121.96], 0.4 W SOQUEL [36.98, -121.96]				
	11/30/12 11:00 PST	1	0	Flood (due to Heavy Rain)
	11/30/12 11:00 PST		0	Source: Broadcast Media
A man drowned in the waters of Soquel Creek in Capitola during a heavy rainstorm that produced minor flooding of the creek. He drowned in a section of the creek in Perry Park at the rear of a grocery store on 809 Bay Avenue in Capitola.				
Direct Fatalities: M47IW				
MONTEREY COUNTY --- 1.7 E NOTLEYS LNDG [36.40, -121.87], 2.0 E NOTLEYS LNDG [36.40, -121.86], 2.0 E NOTLEYS LNDG [36.40, -121.86], 1.8 E NOTLEYS LNDG [36.40, -121.87]				
	11/30/12 11:59 PST		0.50K	Flash Flood (due to Heavy Rain)
	11/30/12 12:30 PST		0	Source: CoCoRaHS
CoCoRaHS spotter reports that rain intensity has increased and the flash flooding is beginning again with overwhelmed drainage culverts and flooding on the roadways with erosion of the banks around culverts observed.				
ALAMEDA COUNTY --- 1.1 WNW PABRICO [37.59, -122.02], 1.0 WNW PABRICO [37.59, -122.02], 1.0 WNW PABRICO [37.59, -122.02], 1.1 WNW PABRICO [37.59, -122.02]				
	11/30/12 12:00 PST		0.50K	Flood (due to Heavy Rain)
	11/30/12 12:00 PST		0	Source: Newspaper
Highway 84 was flooded between Decoto Road and Newark Boulevard and between Mission Boulevard and Main Street.				
SANTA CRUZ COUNTY --- 3.5 SSE ELLICOTT [36.87, -121.81], 3.6 SSE ELLICOTT [36.87, -121.81], 3.6 SSE ELLICOTT [36.87, -121.82], 3.6 SSE ELLICOTT [36.87, -121.82]				
	11/30/12 12:00 PST		0	Flood (due to Heavy Rain)
	11/30/12 12:00 PST		0	Source: Newspaper
The general manager of pajaro dunes south said that 6 inches of water was covering beach road near shell drive due to heavy rainfall.				
MONTEREY COUNTY --- 7.8 SSE LUCIA [36.06, -121.52]				
	11/30/12 12:10 PST		0	Heavy Rain
	11/30/12 12:10 PST		0	Source: RAWS
Storm total rainfall of 8.03 inches measured at Mining Ridge RAWS site at 3288 feet elevation. 3.42 inches of this rain fell in the past 3 hours prior to the report. Minor flooding of urban areas and small streams was observed across Monterey County during this event.				
SANTA CRUZ COUNTY --- 0.6 E FOREST PARK [37.13, -122.12]				
	11/30/12 12:11 PST		0	Heavy Rain
	11/30/12 12:11 PST		0	Source: RAWS
Heavy rainfall measured at 479 feet elevation. Minor flooding of urban areas and small streams was observed across Santa Cruz County during this event.				
SONOMA COUNTY --- 1.0 W PETALUMA SKY RNCH AR [38.25, -122.64], 1.1 W PETALUMA SKY RNCH AR [38.25, -122.64], 1.1 W PETALUMA SKY RNCH AR [38.25, -122.64], 1.0 W PETALUMA SKY RNCH AR [38.25, -122.64]				
	11/30/12 13:00 PST		0	Flash Flood (due to Heavy Rain)
	11/30/12 15:00 PST		0	Source: Mesonet

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
City of Petaluma flood monitoring gauges on Willow Brook at Penngrove Park measured at 62.0 feet. At 60.7 feet, water goes out of the banks. Minor flooding in Petaluma in park lands along the brook and the Petaluma River.				

SONOMA COUNTY --- 0.9 SE PENNGROVE [38.29, -122.66], 0.8 SSE PENNGROVE [38.29, -122.66], 0.8 SSE PENNGROVE [38.29, -122.66], 0.9 SSE PENNGROVE [38.29, -122.66]

11/30/12 15:00 PST	0	Flash Flood (due to Heavy Rain)
11/30/12 17:00 PST	0	Source: Mesonet

City of Petaluma flood monitoring gauges on Willow Brook at Penngrove Park measured stage of 62.4 feet. At 60.7 feet water comes out of the banks. Minor flooding in Petaluma is observed in park land on Willow Brook and Petaluma River.

A series of significant winter storms impacted the district during late November and early December 2012. The first storm arrived November 28 and then was followed by three more winter storms. Each brought strong and gusty winds, heavy rainfall, high surf, and flooding to the region. During the second storm on November 30, at noon time there were reported 13,800 power outages in the Bay Area.

COLORADO, Central and Northeast

(CO-Z031) WEST JACKSON & WEST GRAND COUNTIES ABOVE 9000 FEET, (CO-Z033) S & E JACKSON / LARIMER / N & NE GRAND / NW BOULDER COUNTIES ABOVE 9000 FEET, (CO-Z034) S & SE GRAND / W CENTRAL & SW BOULDER / GILPIN / CLEAR CREEK / SUMMIT / N & W PARK COUNTIES ABOVE 9000 FEET, (CO-Z043) C & S WELD COUNTY, (CO-Z044) MORGAN COUNTY, (CO-Z045) C & E ADAMS & ARAPAHOE COUNTIES

11/10/12 06:00 MST	0	Winter Weather
11/11/12 06:00 MST	0	

A storm system moving across the state brought a period of moderate snowfall to the North Central Mountains, with light to moderate snow across the Northeast Plains of Colorado. In the mountains, storm totals included: 12 inches at Elliot Ridge SNOTEL, 10 inches at Joe Wright SNOTEL, 6 inches at A-Basin Ski Area, Berthoud Pass SNOTEL, Buffalo Creek SNOTEL, Copper Mountain Ski Area, Deadman Hill and Keystone Ski Area. In northeast Colorado, storm totals included: 8 inches, 5 miles southeast of Ft. Lupton; 6 inches, 3 miles west of Greeley, 1 mile northeast of Strasburg, and 6 miles north-northeast of Woodrow Park; 5 inches near Frederick, with lesser amounts elsewhere.

COLORADO, East Central

(CO-Z090) YUMA COUNTY, (CO-Z091) KIT CARSON COUNTY, (CO-Z092) CHEYENNE COUNTY

11/01/12 00:00 MST	0	Drought
11/30/12 23:59 MST	0	

Drought conditions continued from October with east-central Colorado rated as being in Extreme (D3) Drought. No precipitation fell in east-central Colorado during the month of November. Year-to-date precipitation through the end of November averaged 45% to 70% of normal.

(CO-Z092) CHEYENNE COUNTY

11/10/12 10:00 MST	0	High Wind (MAX 51 kt)
11/10/12 14:00 MST	0	

Strong southwest winds developed ahead of a cold front, with gusts reaching 50 to 60 mph across parts of east-central Colorado. Areas of blowing dirt reduced visibility to between one-half and one mile at times.

COLORADO, South Central and Southeast

(CO-Z068) EASTERN SAN JUAN MOUNTAINS ABOVE 10000 FT

11/09/12 02:00 MST	0	Winter Storm
11/10/12 18:00 MST	0	

A slow moving weather system provided a favorable fetch of moist southwesterly flow to produce up to 20 inches of snow near the summit of Wolf Creek Pass.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(CO-Z093) LA JUNTA VICINITY / OTERO COUNTY, (CO-Z094) EASTERN LAS ANIMAS COUNTY, (CO-Z096) EASTERN KIOWA COUNTY, (CO-Z097) BENT COUNTY, (CO-Z098) LAMAR VICINITY / PROWERS COUNTY, (CO-Z099) SPRINGFIELD VICINITY / BACA COUNTY				
	11/10/12 09:00 MST		0	High Wind (MAX 62 kt)
	11/10/12 12:00 MST		0	

A strong storm system produced severe wind gusts over the southeastern plains. Some of the higher measured wind gusts included 58 mph at La Junta (Otero County)...59 mph near Wetmore (Pueblo County)...62 mph near La Veta (Huerfano County)...and 63 mph to 71 mph in Baca County.

COLORADO, West

(CO-Z001) LOWER YAMPA RIVER BASIN, (CO-Z002) CENTRAL YAMPA RIVER BASIN, (CO-Z003) ROAN AND TAVAPUTS PLATEAUS, (CO-Z004) ELKHEAD AND PARK MOUNTAINS, (CO-Z005) UPPER YAMPA RIVER BASIN, (CO-Z006) GRAND VALLEY, (CO-Z007) DEBEQUE TO SILT CORRIDOR, (CO-Z008) CENTRAL COLORADO RIVER BASIN, (CO-Z009) GRAND AND BATTLEMENT MESAS, (CO-Z010) GORE AND ELK MOUNTAINS/CENTRAL MOUNTAIN VALLEYS, (CO-Z011) CENTRAL GUNNISON AND UNCOMPAHGRE RIVER BASIN, (CO-Z012) WEST ELK AND SAWATCH MOUNTAINS, (CO-Z013) FLATTOP MOUNTAINS, (CO-Z014) UPPER GUNNISON RIVER VALLEY, (CO-Z017) UNCOMPAHGRE PLATEAU AND DALLAS DIVIDE, (CO-Z018) NORTHWESTERN SAN JUAN MOUNTAINS, (CO-Z019) SOUTHWESTERN SAN JUAN MOUNTAINS, (CO-Z020) PARADOX VALLEY / LOWER DOLORES RIVER BASIN, (CO-Z021) FOUR CORNERS / UPPER DOLORES RIVER BASIN, (CO-Z022) ANIMAS RIVER BASIN, (CO-Z023) SAN JUAN RIVER BASIN				
	11/01/12 00:00 MST		0	Drought
	11/30/12 23:59 MST		0	

The string of below normal precipitation months remained unbroken going into the late fall months across western Colorado in November of 2012. As a result drought conditions did not improve and ranged from severe to extreme across the whole of the region. Monthly precipitation deficits and reporting climate stations were all below a half of an inch with two locations ending the month over an inch below normal.

(CO-Z004) ELKHEAD AND PARK MOUNTAINS, (CO-Z009) GRAND AND BATTLEMENT MESAS, (CO-Z012) WEST ELK AND SAWATCH MOUNTAINS, (CO-Z013) FLATTOP MOUNTAINS, (CO-Z018) NORTHWESTERN SAN JUAN MOUNTAINS, (CO-Z019) SOUTHWESTERN SAN JUAN MOUNTAINS				
	11/09/12 01:00 MST		0	Winter Storm
	11/11/12 22:00 MST		0	

(CO-Z003) ROAN AND TAVAPUTS PLATEAUS, (CO-Z005) UPPER YAMPA RIVER BASIN, (CO-Z008) CENTRAL COLORADO RIVER BASIN, (CO-Z010) GORE AND ELK MOUNTAINS/CENTRAL MOUNTAIN VALLEYS, (CO-Z014) UPPER GUNNISON RIVER VALLEY, (CO-Z017) UNCOMPAHGRE PLATEAU AND DALLAS DIVIDE				
	11/09/12 20:00 MST		0	Winter Weather
	11/11/12 19:00 MST		0	

A strong Pacific trough and associated cold front brought heavy snow accumulations and strong winds to many mountain locations in western Colorado.

CONNECTICUT, Northeast

(CT-Z002) HARTFORD, (CT-Z003) TOLLAND				
	11/07/12 11:00 EST		0	Heavy Snow
	11/08/12 09:00 EST		0	
(CT-Z004) WINDHAM				
	11/07/12 15:00 EST		0	Winter Weather
	11/08/12 07:44 EST		0	

Low pressure moved up the east coast spreading snow, rain, and wind across southern New England. Cloudy skies coupled with evaporational cooling to keep temperatures cooler than expected which resulted in snow spread across all but the south coasts of RI and MA as well as portions of southeastern MA. This in turn resulted in higher snow accumulations across much of southern New England. In Connecticut, accumulations ranged from two to nine inches.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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CONNECTICUT, Northwest

(CT-Z001) NORTHERN LITCHFIELD, (CT-Z013) SOUTHERN LITCHFIELD

11/07/12 12:00 EST	0	Winter Weather
11/08/12 09:30 EST	0	

An early season nor'easter storm impacted the region about a week after Hurricane Sandy. Upper level energy from both the northern and southern portions of the jetstream merged over the mid-Atlantic region during the morning of November 7th. This helped develop a strong area of low pressure at the surface. This storm slowly moved towards the Jersey Shore on the evening of November 7th to just off Long Island by the morning of the November 8th. The storm moved towards Cape Cod by late in the day on November 8th. The precipitation fell nearly entirely in the form of snow across western New England. The result was a widespread 4 to 8 inches of snow across Litchfield County. In addition, strong and gusty winds to 35 mph caused for some blowing of the snow, making travel difficult.

CONNECTICUT, Southern

(CT-Z005) NORTHERN FAIRFIELD, (CT-Z006) NORTHERN NEW HAVEN, (CT-Z007) NORTHERN MIDDLESEX, (CT-Z009) SOUTHERN FAIRFIELD, (CT-Z010) SOUTHERN NEW HAVEN

11/07/12 10:30 EST	0	Heavy Snow
11/08/12 03:30 EST	0	

Low pressure developed across the Southeast U.S. on November 6 and intensified as it moved northeast, passing south and east of Southern Connecticut by November 8.

This nor'easter came on the heels of Superstorm Sandy. It produced heavy wet snow, strong winds, and minor coastal flooding.

Snowfall ranged from 5-6 inches near Greenwich and Stamford, to 12-14 inches inland just north of Bridgeport and New Haven.

(CT-Z012) SOUTHERN NEW LONDON

11/07/12 18:00 EST	0.20M	High Wind (MAX 52 kt)
11/08/12 05:00 EST	0	

A nor'easter produced high winds across portions of Southeast Connecticut.

DELAWARE

(DE-Z003) INLAND SUSSEX, (DE-Z004) DELAWARE BEACHES

11/07/12 12:00 EST	10K	Strong Wind (MAX 43 kt)
11/08/12 00:00 EST	0	

A nor'easter caused strong winds on the 7th and minor tidal flooding with the overnight high tide on the 7th in Sussex County. Minor tidal flooding and the highest tides occurred with the early morning high tide cycle on the 8th. Prime Hook Road between Broadkill Beach and Slaughter Beach was closed due to flooding. In Millsboro, Chiefs, Oak Orchard and River Roads all had water on them, but remained open. The same for Delaware State Route 1 at Indian River Inlet. Minor street flooding was also reported in Bethany Beach. High tide reached 6.63 feet above mean lower low water at Breakwater Harbor. Strong north to northwest winds occurred along the immediate coast of Sussex County Delaware during the second half of the day on the 7th. Peak wind gusts included 50 mph in Lewes.

The nor'easter was still a relatively weak low pressure system over the northeastern Gulf of Mexico on the morning of November 6th. At 7 p.m. EST on the 6th, it was located east of North Carolina and was starting to intensify. It moved to the northnortheast and at 7 a.m. EST on the 7th, the surface pressure lowered to 994 millibars and it was about 150 miles east of the Delmarva Peninsula. From there it moved very slowly to the northnortheast and intensified. At 7 p.m. EST on the 7th, its surface pressure was down to 984 millibars. Overnight, the surface pressure remained about the same and at 7 a.m. EST on the 8th, the 986 millibar nor'easter was just south of Cape Cod. The rather offshore track resulted in most of the impacts occurring mostly in Sussex County.

DISTRICT OF COLUMBIA

(DC-Z001) DISTRICT OF COLUMBIA

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/06/12 07:00 EST		0	Frost/Freeze
	11/06/12 08:30 EST		0	

High pressure over the Mid Atlantic led to temperatures to drop below freezing overnight.

E PACIFIC

CAPE BLANCO TO PT. ST. GEORGE...10 TO 60 NM COUNTY --- GOLD BEACH [42.25, -124.42], 8.7 SSW BROOKINGS [41.94, -124.36]				
	11/29/12 15:25 PST		0	Marine Thunderstorm Wind (EG 50 kt)
	11/29/12 16:30 PST		0	Source: Official NWS Observations

Doppler radar indicated a squall line over the coastal waters. There were strong synoptic scale winds over the waters at the time...but this squall represented a different threat and a warning was issued for it.

CAPE BLANCO TO PT. ST. GEORGE...OUT TO 10 NM COUNTY --- 39.6 WSW GOLD BEACH [42.03, -125.13], 41.8 WNW GOLD BEACH [42.39, -125.22]				
	11/29/12 15:25 PST		0	Marine Thunderstorm Wind (EG 50 kt)
	11/29/12 16:30 PST		0	Source: Official NWS Observations

Doppler radar indicated a squall line over the coastal waters. There were strong synoptic scale winds over the waters at the time...but this squall represented a different threat and a warning was issued for it.

Doppler radar detected a squall line over the southern Oregon Coastal Waters.

CAPE BLANCO TO PT. ST. GEORGE...10 TO 60 NM COUNTY --- 38.6 NW PORT ORFORD [43.11, -125.08], 38.0 WSW PORT ORFORD [42.56, -125.20]				
	11/30/12 19:43 PST		1K	Marine Strong Wind (EG 40 kt)
	11/30/12 20:45 PST		0	Source: Official NWS Observations

This warning was based on radar and lightning observations. No verifying wind or hail observations were recorded, but given that Special Marine Warning criteria only requires an organized area of convection, a line of thunderstorms qualifies.

FLORENCE TO CAPE BLANCO...10 TO 60 NM COUNTY --- 25.8 WNW BANDON [43.26, -124.89], 35.8 WSW DENMARK [42.57, -125.11]				
	11/30/12 19:43 PST		1K	Marine Strong Wind (EG 40 kt)
	11/30/12 20:45 PST		0	Source: Official NWS Observations

This warning was based on radar and lightning observations. No verifying wind or hail observations were recorded, but given that Special Marine Warning criteria only requires an organized area of convection, a line of thunderstorms qualifies.

CAPE BLANCO TO PT. ST. GEORGE...10 TO 60 NM COUNTY --- 34.6 NNW PORT ORFORD [43.23, -124.69], 18.7 WNW GOLD BEACH [42.31, -124.78]				
	11/30/12 20:49 PST		1K	Marine Strong Wind (EG 40 kt)
	11/30/12 23:45 PST		0	Source: Official NWS Observations

This warning was based on radar and lightning observations. No verifying wind or hail observations were recorded, but given that Special Marine Warning criteria only requires an organized area of convection, a line of thunderstorms qualifies.

CAPE BLANCO TO PT. ST. GEORGE...OUT TO 10 NM COUNTY --- 19.6 NNW PORT ORFORD [43.01, -124.66], 15.4 WNW PISTOL RIVER [42.39, -124.66]				
	11/30/12 20:49 PST		1K	Marine Strong Wind (EG 40 kt)
	11/30/12 23:45 PST		0	Source: Official NWS Observations

This warning was based on radar and lightning observations. No verifying wind or hail observations were recorded, but given that Special Marine Warning criteria only requires an organized area of convection, a line of thunderstorms qualifies.

FLORENCE TO CAPE BLANCO...10 TO 60 NM COUNTY --- 28.1 NW BANDON [43.40, -124.83], 19.1 NW GOLD BEACH [42.42, -124.71]				
	11/30/12 20:49 PST		1K	Marine Strong Wind (EG 40 kt)
	11/30/12 23:45 PST		0	Source: Official NWS Observations

This warning was based on radar and lightning observations. No verifying wind or hail observations were recorded, but given that Special Marine Warning criteria only requires an organized area of convection, a line of thunderstorms qualifies.

FLORENCE TO CAPE BLANCO...OUT TO 10 NM COUNTY --- 11.4 NW LANGLOIS [43.03, -124.62], 17.6 SSW DENMARK [42.59, -124.60]				
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Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/30/12 20:49 PST		1K	Marine Strong Wind (EG 40 kt)
	11/30/12 23:45 PST		0	Source: Official NWS Observations

This warning was based on radar and lightning observations. No verifying wind or hail observations were recorded, but given that Special Marine Warning criteria only requires an organized area of convection, a line of thunderstorms qualifies.

An organized fast-moving line of thunderstorms moved into the Oregon coastal waters.

FLORIDA, Southern

(FL-Z168) COASTAL PALM BEACH COUNTY

11/12/12 13:00 EST		0	Rip Current
11/12/12 13:30 EST	1	0	

Strong high pressure over the mid-Atlantic states caused breezy east winds over the southeast coast of the Florida peninsula with strong rip currents at the Palm Beach County beaches.

(FL-Z172) COASTAL BROWARD COUNTY

11/22/12 04:00 EST	1	0	High Surf
11/23/12 18:00 EST	3	0	

Direct Fatalities: F54BO

Rough seas of 8 to 10 feet behind a cold front along with a building northerly swell led to very rough seas and hazardous marine conditions over the Atlantic waters of Southeast Florida.

GEORGIA, North and Central

(GA-Z009) TOWNS

11/03/12 19:00 EST		2K	Wildfire
11/04/12 00:00 EST		0	

A northwest flow pattern was in place with a deep trough across the eastern United States. A weak shortwave moved into the Southeast with only light scattered showers developing in the afternoon. Otherwise, dry conditions prevailed across the area, though relative humidity values were not quite dry enough for fire danger conditions.

(GA-Z007) GILMER, (GA-Z009) TOWNS, (GA-Z011) CHATTOOGA

11/10/12 15:15 EST		14K	Wildfire
11/12/12 08:00 EST		0	

High pressure over the area kept dry conditions in place. Though afternoon mixing was weak, dewpoints were dry enough for prolonged dangerous fire weather conditions, especially across north Georgia.

(GA-Z012) GORDON

11/18/12 02:30 EST		12K	Wildfire
11/27/12 08:00 EST		0	

An upper low over the region shifted east, allowing flow to transition to nearly zonal aloft. A large surface ridge dominated the eastern United States, continuing to bring dry air to the region. Fuels dried significantly through this dry period, with relative humidity values dropping below 25 percent, leading to widespread fire danger conditions.

(GA-Z007) GILMER, (GA-Z015) LUMPKIN

11/24/12 19:30 EST		0.23M	Wildfire
11/30/12 23:59 EST		0	

An upper low over the region shifted east, allowing flow to transition to nearly zonal aloft. A large surface ridge dominated the eastern United States, continuing to bring dry air to the region. Fuels dried significantly through this dry period, with relative humidity values

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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dropping below 25 percent, leading to widespread fire danger conditions.

GEORGIA, Southwest

(GA-Z120) QUITMAN, (GA-Z121) CLAY, (GA-Z122) RANDOLPH, (GA-Z123) CALHOUN, (GA-Z124) TERRELL, (GA-Z125) DOUGHERTY, (GA-Z126) LEE, (GA-Z127) WORTH, (GA-Z142) EARLY, (GA-Z143) MILLER, (GA-Z144) BAKER, (GA-Z145) MITCHELL, (GA-Z146) COLQUITT, (GA-Z156) DECATUR, (GA-Z157) GRADY, (GA-Z158) THOMAS

11/01/12 00:00 EST	0	Drought
11/30/12 23:59 EST	0	

D2-D3 drought conditions affected portions of the counties listed through November and into December.

(GA-Z128) TURNER, (GA-Z130) BEN HILL, (GA-Z155) SEMINOLE

11/20/12 00:00 EST	0	Drought
11/30/12 23:59 EST	0	

D2 drought conditions expanded into portions of Seminole, Turner, and Ben Hill counties during the last 10 days of November and continued into December.

GULF OF MEXICO

CORPUS CHRISTI TO BAFFIN BAY COUNTY --- 4.3 ENE CORPUS CHRISTI [27.80, -97.35]

11/03/12 20:42 CST	0	Marine Thunderstorm Wind (MG 51 kt)
11/03/12 21:06 CST	0	Source: Mesonet

TCOON site at the Corpus Christi Bay platform measured a gust to 51 knots.

CORPUS CHRISTI TO BAFFIN BAY COUNTY --- 2.1 ENE CORPUS CHRISTI [27.79, -97.39]

11/03/12 21:00 CST	0	Marine Thunderstorm Wind (MG 41 kt)
11/03/12 21:06 CST	0	Source: Mesonet

TCOON site at the Corpus Christi Marina measured a gust to 41 knots.

CORPUS CHRISTI TO BAFFIN BAY COUNTY --- 3.8 N BOB HALL PIER [27.63, -97.24]

11/03/12 21:18 CST	0	Marine Thunderstorm Wind (MG 49 kt)
11/03/12 21:24 CST	0	Source: Mesonet

TCOON site at Packery Channel measured a gust to 49 knots.

PT ARANSAS TO BAFFIN BAY TX OUT 20NM COUNTY --- 0.8 E BOB HALL PIER [27.58, -97.22]

11/03/12 21:42 CST	0	Marine Thunderstorm Wind (MG 49 kt)
11/03/12 21:48 CST	0	Source: Mesonet

NOS station at Bob Hall Pier measured a gust to 49 knots.

The thunderstorms, that formed along the sea breeze boundary over the Coastal Bend during the afternoon, moved southeast into the coastal waters of the Middle Texas coast on the evening of November 3rd. The thunderstorms produced wind gusts between 50 and 65 mph.

COASTAL WATERS FROM INTRACOASTAL CITY TO CAMERON LA OUT 20 NM COUNTY --- 23.6 WSW WHITE LAKE [29.59, -92.90]

11/05/12 19:00 CST	0	Marine Thunderstorm Wind (MG 52 kt)
11/05/12 19:00 CST	0	Source: Public

A wind gust of 60 MPH was recorded at a platform in East Cameron Block 14 with a passing storm.

INTRACOASTAL CITY LA TO CAMERON LA 20 TO 60NM COUNTY --- 36.8 SW WHITE LAKE [29.31, -92.96]

11/05/12 19:30 CST	0	Marine Thunderstorm Wind (EG 35 kt)
11/05/12 19:30 CST	0	Source: Public

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
A wind gust of 40 MPH was estimated at a platform in East Cameron 81 from a passing storm.				
INTRACOASTAL CITY LA TO CAMERON LA 20 TO 60NM COUNTY --- 40.8 S WHITE LAKE [29.09, -92.52]				
	11/05/12 20:50 CST		0	Marine Thunderstorm Wind (MG 52 kt)
	11/05/12 20:50 CST		0	Source: Public
A wind gust of 60 MPH was recorded with a passing storm at a platform in Vermilion Block 119.				
INTRACOASTAL CITY LA TO CAMERON LA 20 TO 60NM COUNTY --- 57.5 SSE WHITE LAKE [28.91, -92.16]				
	11/05/12 21:45 CST		0	Marine Thunderstorm Wind (MS 35 kt)
	11/05/12 21:55 CST		0	Source: Public
Winds were sustained at 40 MPH for 10 minutes with higher gusts at a platform in Vermilion Block 171.				
Strong to severe thunderstorms that were over South Louisiana continued moving southeast and into the near shore waters of the Gulf of Mexico and high wind gusts were recorded as these storms passed.				
LAKE PONCHARTRAIN AND LAKE MAUREPAS COUNTY --- LKFRNT ARPT NEW [30.05, -90.03]				
	11/05/12 20:12 CST		0	Marine Thunderstorm Wind (MG 41 kt)
	11/05/12 20:12 CST		0	Source: ASOS
Automated weather observation at Lakefront Airport reported a wind gust to 41 knots at 2012CST.				
A slow moving cold front produced strong thunderstorms during the evening of the 5th.				
COASTAL WATERS FROM CAMERON LA TO HIGH ISLAND TX OUT 20 NM COUNTY --- 6.0 E MOUTH OF SABINE RIVER [29.68, -93.73]				
	11/27/12 01:15 CST		0	Marine Thunderstorm Wind (MG 35 kt)
	11/27/12 01:15 CST		0	Source: Public
A wind gust of 40 MPH was measured at a platform 8 miles southwest of Johnsons Bayou in West Cameron Block 17.				
COASTAL WATERS FROM CAMERON LA TO HIGH ISLAND TX OUT 20 NM COUNTY --- 3.5 SW CAMERON [29.77, -93.34]				
	11/27/12 02:12 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	11/27/12 02:12 CST		0	Source: C-MAN Station
A wind gust of 39 MPH was recorded at the Cameron tide gauge with a thunderstorm.				
COASTAL WATERS FROM CAMERON LA TO HIGH ISLAND TX OUT 20 NM COUNTY --- 3.5 SW CAMERON [29.77, -93.34]				
	11/27/12 04:13 CST		0	Marine Thunderstorm Wind (MG 34 kt)
	11/27/12 04:13 CST		0	Source: C-MAN Station
A wind gust of 39 MPH was recorded at the Cameron tide gauge with a thunderstorm.				
Multiple high wind gusts were recorded over the coastal waters with thunderstorms.				
HAWAII				
(HI-Z002) KAUAI WINDWARD, (HI-Z003) KAUAI LEEWARD, (HI-Z005) OAHU SOUTH SHORE, (HI-Z006) WAIANAE COAST, (HI-Z013) MOLOKAI LEEWARD, (HI-Z014) LANAI MAKAI, (HI-Z015) LANAI MAUKA, (HI-Z018) MAUI LEEWARD WEST, (HI-Z019) MAUI CENTRAL VALLEY, (HI-Z021) LEEWARD HALEAKALA, (HI-Z023) KONA, (HI-Z024) SOUTH BIG ISLAND, (HI-Z026) KOHALA, (HI-Z027) BIG ISLAND INTERIOR				
	11/01/12 00:00 HST		0	Drought
	11/30/12 23:59 HST		0	
Dry weather conditions persisted over much of the Aloha State, with portions of Oahu deteriorating into the D2 category of severe drought in November. Water restrictions, mandatory and voluntary, were extended through the month.				
(HI-Z001) NIIHAU, (HI-Z002) KAUAI WINDWARD, (HI-Z003) KAUAI LEEWARD, (HI-Z005) OAHU SOUTH SHORE, (HI-Z007) OAHU NORTH SHORE, (HI-Z008) OAHU KOOLAU, (HI-Z009) OLOMANA, (HI-Z012) MOLOKAI WINDWARD, (HI-Z013) MOLOKAI LEEWARD, (HI-Z017) MAUI WINDWARD WEST, (HI-Z019) MAUI CENTRAL VALLEY, (HI-Z020) WINDWARD HALEAKALA, (HI-Z025) BIG ISLAND NORTH AND EAST				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/04/12 06:00 HST		0	High Surf
	11/07/12 11:00 HST	1	0	

A combination of swells generated surf of 15 to 25 feet along the north-facing shores of Niihau, Kauai, Oahu, Molokai, Maui, and the Big Island of Hawaii; 8 to 14 feet along the west-facing shores of Niihau, Kauai, and Molokai; and 6 to 10 feet along the east-facing shores of Oahu and the Big Island. Lifeguards rescued several individuals who were overwhelmed by the dangerous surf, including a man in his mid-40s taken to a hospital in critical condition on Oahu after getting into trouble at Sandy Beach. That was on Sunday, Nov. 4. No serious property damage was reported.

(HI-Z001) NIIHAU, (HI-Z002) KAUAI WINDWARD, (HI-Z003) KAUAI LEEWARD, (HI-Z007) OAHU NORTH SHORE, (HI-Z008) OAHU KOOLAU, (HI-Z012) MOLOKAI WINDWARD, (HI-Z013) MOLOKAI LEEWARD, (HI-Z017) MAUI WINDWARD WEST, (HI-Z019) MAUI CENTRAL VALLEY, (HI-Z020) WINDWARD HALEAKALA

11/15/12 14:00 HST	0	High Surf
11/17/12 02:00 HST	0	

A swell from a low north of the islands produced surf of 10 to 15 feet along the north-facing shores of Niihau, Kauai, Oahu, Molokai, and Maui. There were no reports of significant property damage or injuries.

(HI-Z017) MAUI WINDWARD WEST, (HI-Z020) WINDWARD HALEAKALA, (HI-Z025) BIG ISLAND NORTH AND EAST

11/22/12 04:00 HST	0	High Surf
11/22/12 15:30 HST	0	

A long period north swell caused surf of 6 to 10 feet along the east shores of Maui and the Big Island of Hawaii with a northern exposure. No serious injuries or property damage were reported.

MAUI COUNTY --- 2.2 NE HUELO [20.92, -156.20], 1.6 N WAIANAPANAPA SP [20.80, -156.00]

11/22/12 07:31 HST	0	Heavy Rain
11/22/12 10:15 HST	0	Source: Official NWS Observations

HONOLULU COUNTY --- 0.9 ESE WHEELER AFB [21.48, -158.02], 0.9 ESE PEARL CITY [21.39, -157.97]

11/23/12 14:29 HST	0	Heavy Rain
11/23/12 17:08 HST	0	Source: Official NWS Observations

MAUI COUNTY --- 3.7 ESE MAKENA [20.66, -156.37], 2.0 SW MAKENA [20.65, -156.45]

11/23/12 15:45 HST	0	Heavy Rain
11/23/12 17:15 HST	0	Source: Official NWS Observations

An upper trough near the islands induced heavy rain and thunderstorms over Maui and Oahu. The heavy downpour with the thunderstorm on Oahu may have contributed to the partial collapse of a roof on a school's old auditorium on Friday, Nov. 23. The rain caused significant ponding on roadways for a brief time on Oahu, and to a lesser extent Maui; and small stream and drainage ditch flooding. Also, there were several reports of small hail with the thunderstorm on Oahu. No serious injuries were reported. The cost of damages on the school auditorium was not available.

(HI-Z010) CENTRAL OAHU

11/26/12 20:49 HST	0	Wildfire
11/27/12 20:00 HST	0	

A fire burned 75 acres of dry brush in former pineapple fields near Wahiawa in central Oahu. The blaze scorched the area bounded by Kamananui Road, Wilikina Drive, Kamehameha Highway, and Lake Wilson. No homes or other structures were threatened. The cause of the fire was not known. No significant injuries or property damage were reported.

(HI-Z001) NIIHAU, (HI-Z002) KAUAI WINDWARD, (HI-Z003) KAUAI LEEWARD, (HI-Z007) OAHU NORTH SHORE, (HI-Z008) OAHU KOOLAU, (HI-Z009) OLOMANA, (HI-Z012) MOLOKAI WINDWARD, (HI-Z013) MOLOKAI LEEWARD, (HI-Z017) MAUI WINDWARD WEST, (HI-Z019) MAUI CENTRAL VALLEY, (HI-Z020) WINDWARD HALEAKALA, (HI-Z025) BIG ISLAND NORTH AND EAST

11/29/12 22:00 HST	0	High Surf
11/30/12 22:00 HST	0	

A swell from a low north of the Aloha State generated surf of 12 to 16 feet along the north-facing shores of all the main islands except Lanai. No serious property damage or injuries were reported.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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IDAHO, North

(ID-Z007) OROFINO / GRANGEVILLE REGION

11/20/12 06:15 PST	0	High Wind (MAX 61 kt)
11/20/12 06:15 PST	0	

Strong non-thunderstorm winds were observed in Idaho as a jet streak moved across the region.

IDAHO, Northwest

(ID-Z001) NORTHERN PANHANDLE

11/08/12 14:00 PST	0	Winter Weather
11/09/12 07:30 PST	0	

A surface low pressure system spun up in eastern Washington in the afternoon on the eighth and moved little as the low eventually filled in and dissipated during the morning hours on the ninth. Moisture rotating in around the low pressure system resulted in bands of snow that developed across the Northern Panhandle along the northeastern flank of the low. A localized portion of this area near the Spirit Lake area picked up over six inches of snowfall. This resulted in snow covered roadways and slick driving conditions for the Friday morning commute.

(ID-Z001) NORTHERN PANHANDLE

11/12/12 01:15 PST	0	Winter Weather
11/12/12 14:00 PST	0	

Moist isentropic ascent ahead of an occluded front pushing into the region off of the eastern Pacific clashed with cold continental air established over the area. Steady snowfall ensued with roads quickly becoming snow covered as road temperatures dipped below freezing during the early morning hours. A general two four inches of snowfall was recorded across the Northern Panhandle.

(ID-Z001) NORTHERN PANHANDLE

11/19/12 02:00 PST	0	Heavy Snow
11/19/12 16:00 PST	0	

A moist warm front brought heavy snow to the mountains across the Northern Panhandle above 4000 feet. Schweitzer Ski Resort received eight inches of snowfall and Bear Mountain further east received seventeen inches through the event.

IDAHO, Southeast

(ID-Z018) SAWTOOTH MOUNTAINS, (ID-Z031) BIG AND LITTLE WOOD RIVER REGION

11/20/12 05:00 MST	0	Heavy Snow
11/21/12 17:00 MST	0	

Nine to 18 inches of snow were widespread at elevations above 7 thousand feet in the Central Mountains.

ILLINOIS, Northeast

KANE COUNTY --- 1.6 E AURORA [41.77, -88.29]

11/10/12 11:19 CST	0	Hail (0.75 in)
11/10/12 11:20 CST	0	Source: Trained Spotter

Hail fell at Wolfs Crossing and Eola Road.

KANE COUNTY --- 0.5 W LOVEDALE [41.78, -88.36]

11/10/12 11:29 CST	0	Hail (0.75 in)
11/10/12 11:30 CST	0	Source: NWS Employee

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
DU PAGE COUNTY --- 0.9 NW WOODRIDGE [41.74, -88.04]				
	11/10/12 11:30 CST		0	Hail (0.88 in)
	11/10/12 11:31 CST		0	Source: Public
Hail fell at 83rd and Ashbury.				
KANE COUNTY --- 1.0 E BATAVIA [41.85, -88.30]				
	11/10/12 11:32 CST		0	Hail (0.75 in)
	11/10/12 11:33 CST		0	Source: Trained Spotter
KANE COUNTY --- 1.0 E BATAVIA [41.85, -88.30]				
	11/10/12 11:35 CST		0	Hail (0.75 in)
	11/10/12 11:36 CST		0	Source: COOP Observer
Pea to dime size hail fell.				
DU PAGE COUNTY --- 0.5 E BELMONT RD [41.80, -88.02]				
	11/10/12 11:36 CST		0	Hail (0.88 in)
	11/10/12 11:37 CST		0	Source: Public
DU PAGE COUNTY --- 1.4 S NAPERVILLE [41.76, -88.15]				
	11/10/12 11:46 CST		0	Hail (0.75 in)
	11/10/12 11:47 CST		0	Source: Trained Spotter
Hail fell at Fort Hill Drive and Aurora Road.				
DU PAGE COUNTY --- 0.7 S BRANDYWINE [41.84, -87.95]				
	11/10/12 12:00 CST		0	Hail (0.88 in)
	11/10/12 12:02 CST		0	Source: COOP Observer
Nickel size hail fell near Interstate 88 and Midwest Road.				
WILL COUNTY --- 2.7 WNW PLAINFIELD CLOW ARPT [41.71, -88.18]				
	11/10/12 12:02 CST		0	Hail (1.50 in)
	11/10/12 12:06 CST		0	Source: CoCoRaHS
DU PAGE COUNTY --- 1.4 S NAPERVILLE [41.76, -88.15]				
	11/10/12 12:09 CST		0	Hail (0.75 in)
	11/10/12 12:10 CST		0	Source: Trained Spotter
Hail was reported on Newport Drive.				
WILL COUNTY --- 1.2 SW BARBERS CORNERS [41.71, -88.09]				
	11/10/12 12:13 CST		0	Hail (1.00 in)
	11/10/12 12:16 CST		0	Source: Public
One inch diameter hail fell at Boughton Road and Schmidt Road.				
WILL COUNTY --- 1.1 N PLAINFIELD CLOW ARPT [41.72, -88.13]				
	11/11/12 12:10 CST		0	Hail (0.75 in)
	11/11/12 12:10 CST		0	Source: Public
Thunderstorms produced hail over northeast Illinois during the late morning and early afternoon.				
(IL-Z014) COOK				
	11/11/12 16:00 CST		25K	High Wind (MAX 50 kt)
	11/11/12 17:00 CST		0	
A cold front swept across the region with strong southerly winds ahead of the front.				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(IL-Z014) COOK				
	11/12/12 21:00 CST		0	Winter Weather
	11/13/12 02:00 CST		0	

A 42 year-old man was killed when he was struck by another car on the expressway after leaving his own vehicle following a collision. The season's first light snow as well as black ice contributed to the accident. State police reported "a ton of crashes" including 17 crashes in one hour alone between 9:45 and 10:45 pm the night of November 12th.

(IL-Z014) COOK				
	11/23/12 10:55 CST		20K	Strong Wind (MAX 30 kt)
	11/23/12 10:55 CST	2	0	

Strong winds occurred behind a cold front causing a tree to uproot and fall onto a car, injuring two of its occupants.

(IL-Z014) COOK				
	11/27/12 00:00 CST		0	Cold/Wind Chill
	11/27/12 09:00 CST		0	

Cold exposure contributed to the death of an 83 year old woman who was found in her home. The high temperature was 33 and the low was 17.

ILLINOIS, Northwest

(IL-Z001) JO DAVIESS, (IL-Z002) STEPHENSON, (IL-Z007) CARROLL, (IL-Z009) WHITESIDE, (IL-Z015) ROCK ISLAND, (IL-Z016) HENRY, (IL-Z017) BUREAU, (IL-Z018) PUTNAM, (IL-Z024) MERCER, (IL-Z025) HENDERSON, (IL-Z026) WARREN, (IL-Z034) HANCOCK, (IL-Z035) MCDONOUGH				
	11/01/12 00:00 CST		0	Drought
	11/30/12 00:00 CST		0	

The drought that began in June and worsened during the summer and into the fall finally began to show improving conditions in November. This was due to somewhat more rainfall as the weather pattern became a bit more active. For the first two weeks of the month all of eastern IA, northwest and western IL and extreme northeast MO was in a severe drought (D2), according to the U.S. Drought Monitor. However, during the last half of the month only portions of northeast and eastern IA and northwest IL were still in a severe drought. The remainder of the area had improved to a moderate drought (D1) classification.

(IL-Z001) JO DAVIESS, (IL-Z002) STEPHENSON, (IL-Z007) CARROLL, (IL-Z009) WHITESIDE, (IL-Z015) ROCK ISLAND, (IL-Z016) HENRY, (IL-Z017) BUREAU, (IL-Z018) PUTNAM, (IL-Z024) MERCER, (IL-Z025) HENDERSON, (IL-Z026) WARREN, (IL-Z034) HANCOCK, (IL-Z035) MCDONOUGH				
	11/20/12 05:00 CST		0	Dense Fog
	11/20/12 23:59 CST		0	

A weak trough of low pressure from MN into the southern Plains brought light south winds and increasing low level moisture into the region. This resulted in the development of widespread dense fog beginning during the evening of November 19, 2012 and lasting into much of November 20. Other than a brief improvement in conditions during the early to mid afternoon, visibilities were frequently at or below 1/4 mile.

(IL-Z001) JO DAVIESS, (IL-Z002) STEPHENSON, (IL-Z007) CARROLL, (IL-Z009) WHITESIDE, (IL-Z015) ROCK ISLAND, (IL-Z016) HENRY, (IL-Z017) BUREAU, (IL-Z018) PUTNAM, (IL-Z024) MERCER, (IL-Z025) HENDERSON, (IL-Z026) WARREN, (IL-Z034) HANCOCK, (IL-Z035) MCDONOUGH				
	11/21/12 00:00 CST		0	Dense Fog
	11/21/12 11:55 CST		0	

Widespread dense fog with visibilities frequently 1/4 mile or less occurred during the night and much of the morning on November 21, 2012. The fog was the result of weak high pressure bringing clear skies and light winds, but low level moisture was plentiful to help create the fog. As the high pushed off to the east of the area increasing south winds helped to dissipate the fog by noon. Flights were cancelled and travel by vehicle was slowed or delayed which disrupted many plans being this was the day before Thanksgiving.

ILLINOIS, South

(IL-Z081) FRANKLIN, (IL-Z082) HAMILTON, (IL-Z083) WHITE, (IL-Z085) WILLIAMSON, (IL-Z086) SALINE, (IL-Z087) GALLATIN, (IL-Z088) UNION, (IL-Z089) JOHNSON, (IL-Z090) POPE, (IL-Z091) HARDIN, (IL-Z092) ALEXANDER, (IL-Z093) PULASKI, (IL-Z094) MASSAC				
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Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

There was no appreciable change in long-term drought conditions during the month of November. Rainfall was below normal during the month, but this deficit was partially offset by low evaporation rates caused by unseasonably cool air. Moderate drought conditions persisted throughout November south of a line from Carbondale to Carmi. The main impact of the long-term drought was on farm ponds used for irrigating fields or raising livestock. Soil moisture was near normal. Some pastures remained in poor or very poor condition, but many of them improved to adequate condition. Streamflows were running about normal. At the Carbondale airport, November rainfall was 1.69 inches, which was 2.56 inches below normal. The drought began in May and continued into December in most areas.

(IL-Z075) JEFFERSON, (IL-Z076) WAYNE, (IL-Z082) HAMILTON, (IL-Z083) WHITE, (IL-Z084) JACKSON, (IL-Z085) WILLIAMSON, (IL-Z086) SALINE, (IL-Z087) GALLATIN, (IL-Z088) UNION, (IL-Z089) JOHNSON, (IL-Z090) POPE, (IL-Z091) HARDIN, (IL-Z092) ALEXANDER, (IL-Z093) PULASKI, (IL-Z094) MASSAC

11/08/12 04:00 CST	0	Dense Fog
11/08/12 07:00 CST	0	

Widespread dense fog reduced visibility to one-quarter mile or less across most of southern Illinois. Surface high pressure was centered over the lower and mid Mississippi Valley, which resulted in clear and calm conditions conducive to dense fog.

(IL-Z075) JEFFERSON, (IL-Z076) WAYNE, (IL-Z080) PERRY, (IL-Z081) FRANKLIN, (IL-Z082) HAMILTON, (IL-Z083) WHITE, (IL-Z084) JACKSON, (IL-Z085) WILLIAMSON, (IL-Z086) SALINE, (IL-Z088) UNION, (IL-Z089) JOHNSON, (IL-Z090) POPE, (IL-Z092) ALEXANDER, (IL-Z093) PULASKI, (IL-Z094) MASSAC

11/21/12 03:00 CST	0	Dense Fog
11/21/12 09:00 CST	0	

Widespread dense fog reduced visibility to one-quarter mile or less across most of southern Illinois. Surface high pressure was centered over the mid Mississippi Valley, which resulted in clear and calm conditions conducive to dense fog.

(IL-Z076) WAYNE, (IL-Z077) EDWARDS, (IL-Z078) WABASH, (IL-Z081) FRANKLIN, (IL-Z082) HAMILTON, (IL-Z083) WHITE, (IL-Z085) WILLIAMSON, (IL-Z086) SALINE, (IL-Z087) GALLATIN, (IL-Z088) UNION, (IL-Z089) JOHNSON, (IL-Z090) POPE, (IL-Z091) HARDIN, (IL-Z092) ALEXANDER, (IL-Z093) PULASKI, (IL-Z094) MASSAC

11/22/12 00:00 CST	0	Dense Fog
11/22/12 07:00 CST	0	

Widespread dense fog blanketed most of southern Illinois, mainly to the southeast of a line from Mount Vernon to Carbondale. Visibility was one-quarter mile or less. High pressure over the central Appalachian Mountains produced a light south wind flow of moist air, which contributed to the dense fog.

INDIANA, Southwest

(IN-Z081) GIBSON, (IN-Z085) POSEY, (IN-Z086) VANDERBURGH

11/22/12 03:00 CST	0	Dense Fog
11/22/12 07:00 CST	0	

Widespread dense fog blanketed parts of southwest Indiana, mainly along and west of a line from Princeton to Evansville. Visibility was one-quarter mile or less. High pressure over the central Appalachian Mountains produced a light south wind flow of moist air, which contributed to the dense fog.

IOWA, East Central and Southeast

(IA-Z040) BUCHANAN, (IA-Z041) DELAWARE, (IA-Z042) DUBUQUE, (IA-Z051) BENTON, (IA-Z052) LINN, (IA-Z053) JONES, (IA-Z054) JACKSON, (IA-Z063) IOWA, (IA-Z064) JOHNSON, (IA-Z065) CEDAR, (IA-Z066) CLINTON, (IA-Z067) MUSCATINE, (IA-Z068) SCOTT, (IA-Z076) KEOKUK, (IA-Z077) WASHINGTON, (IA-Z078) LOUISA, (IA-Z087) JEFFERSON, (IA-Z088) HENRY, (IA-Z089) DES MOINES, (IA-Z098) VAN BUREN, (IA-Z099) LEE

11/01/12 00:00 CST	0	Drought
11/30/12 00:00 CST	0	

The drought that began in June and worsened during the summer and into the fall finally began to show improving conditions in November. This was due to somewhat more rainfall as the weather pattern became a bit more active. For the first two weeks of the

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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month all of eastern IA, northwest and western IL and extreme northeast MO was in a severe drought (D2), according to the U.S. Drought Monitor. However, during the last half of the month only portions of northeast and eastern IA and northwest IL were still in a severe drought. The remainder of the area had improved to a moderate drought (D1) classification.

(IA-Z040) BUCHANAN, (IA-Z041) DELAWARE, (IA-Z042) DUBUQUE, (IA-Z051) BENTON, (IA-Z052) LINN, (IA-Z053) JONES, (IA-Z054) JACKSON, (IA-Z063) IOWA, (IA-Z064) JOHNSON, (IA-Z065) CEDAR, (IA-Z066) CLINTON, (IA-Z067) MUSCATINE, (IA-Z068) SCOTT, (IA-Z076) KEOKUK, (IA-Z077) WASHINGTON, (IA-Z078) LOUISA, (IA-Z087) JEFFERSON, (IA-Z088) HENRY, (IA-Z089) DES MOINES, (IA-Z098) VAN BUREN, (IA-Z099) LEE	11/19/12 21:35 CST	0	Dense Fog
	11/20/12 23:59 CST	0	

A weak trough of low pressure from MN into the southern Plains brought light south winds and increasing low level moisture into the region. This resulted in the development of widespread dense fog beginning during the evening of November 19, 2012 and lasting into much of November 20. Other than a brief improvement in conditions during the early to mid afternoon, visibilities were frequently at or below 1/4 mile. According to KWWL-TV the dense fog contributed to a multi-vehicle accident at about 6 pm on November 20. The accident, which occurred on Highway 30 west of Cedar Rapids near the Benton/Linn county line, injured 2 motorists. About 9 miles of westbound traffic had to be re-routed while the accident was cleaned up.

(IA-Z040) BUCHANAN, (IA-Z041) DELAWARE, (IA-Z042) DUBUQUE, (IA-Z051) BENTON, (IA-Z052) LINN, (IA-Z053) JONES, (IA-Z054) JACKSON, (IA-Z063) IOWA, (IA-Z064) JOHNSON, (IA-Z065) CEDAR, (IA-Z066) CLINTON, (IA-Z067) MUSCATINE, (IA-Z068) SCOTT, (IA-Z076) KEOKUK, (IA-Z077) WASHINGTON, (IA-Z078) LOUISA, (IA-Z087) JEFFERSON, (IA-Z088) HENRY, (IA-Z089) DES MOINES, (IA-Z098) VAN BUREN, (IA-Z099) LEE	11/21/12 00:00 CST	0	Dense Fog
	11/21/12 14:00 CST	0	

Widespread dense fog with visibilities frequently 1/4 mile or less occurred during the night and much of the morning on November 21, 2012. The fog was the result of weak high pressure bringing clear skies and light winds, but low level moisture was plentiful to help create the fog. As the high pushed off to the east of the area increasing south winds helped to dissipate the fog by noon. Flights were cancelled and travel by vehicle was slowed or delayed which disrupted many plans being this was the day before Thanksgiving.

IOWA, Northeast

(IA-Z008) MITCHELL, (IA-Z009) HOWARD, (IA-Z018) FLOYD, (IA-Z019) CHICKASAW, (IA-Z029) FAYETTE, (IA-Z030) CLAYTON	11/01/12 00:00 CST	0	Drought
	11/30/12 23:59 CST	0	

Precipitation amounts during November allowed for a continued improvement in the drought conditions across northeast Iowa. Precipitation amounts for the month averaged 0.5 to 1.5 inches which allowed for a one category improvement in some northeast Iowa counties. Enough precipitation was received across Chickasaw, Clayton and Fayette Counties for them to be removed from the severe drought classification. Improvement was also noted in Floyd, Howard and Mitchell Counties, but not enough to remove them from the severe to extreme drought classification. Dairy farmers were impacted by the drought during the latter half of the year because of higher feed costs. Milk production increased during the first part of the year leading to lower milk prices. Milk prices remained low over the latter half of the year, which combined with higher feed costs, caused the milk price to feed cost margin to drop to just above \$1 per hundredweight after being between \$7 and \$9 at this time in 2011. The USDA announced that the harvest price payout for crop insurance would be \$7.50 per bushel for corn and \$15.39 per bushel for soybeans while the non-harvest price payout would be \$5.68 per bushel for corn and \$12.55 per bushel for soybeans. Topsoil and subsoil water levels were extremely low across the state of Iowa due to the ongoing drought and farmers were urged to not do any fall tillage. Reports indicate there was an average of 2 to 4 inches of water in the top five feet of soil in Iowa when a normal soil moisture profile is 10 to 11 inches. Topsoil statewide was rated at 28 percent very short and 41 percent short with the subsoil rated at 62 percent very short and 31 percent short.

IOWA, Northwest

(IA-Z001) LYON, (IA-Z002) OSCEOLA, (IA-Z003) DICKINSON, (IA-Z012) SIOUX, (IA-Z013) O'BRIEN, (IA-Z014) CLAY, (IA-Z020) PLYMOUTH, (IA-Z021) CHEROKEE, (IA-Z022) BUENA VISTA, (IA-Z031) WOODBURY, (IA-Z032) IDA	11/01/12 00:00 CST	0	Drought
	11/30/12 23:59 CST	0	

Drought conditions continued over all of northwest Iowa in November with below normal rainfall keeping soil dry. Rainfall for the month was below normal everywhere. The poor germination of winter wheat was more strongly confirmed. There were few remaining water restrictions given the much lower water usage compared with the summer and early fall, but the low soil moisture levels presented a bleak outlook for the next spring and summer without a very significant increase in precipitation over the winter. Drought was generally

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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listed as continued severe to extreme for the area.

(IA-Z003) DICKINSON

11/10/12 20:12 CST	0	High Wind (MAX 55 kt)
11/10/12 20:12 CST	0	

Strong southerly winds just ahead of a cold front produced a gust to high wind strength in Dickinson County of northwest Iowa on the evening of November 10th.

IOWA, Southwest

(IA-Z043) MONONA, (IA-Z055) HARRISON, (IA-Z056) SHELBY, (IA-Z069) POTTAWATTAMIE, (IA-Z079) MILLS, (IA-Z090) FREMONT

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The drought intensity remained in the Extreme category over much of western Iowa from around Glenwood north through Onawa, with a Moderate or Severe Drought over the area southeast of there. Some of the area southeast of the Extreme category notched a slight improvement over October. Precipitation for the month was generally 1/2 to a little over 1 inch, around a 1/2 to inch below normal. The drought persisted over much of western Iowa into December.

KANSAS, East

(KS-Z008) REPUBLIC, (KS-Z009) WASHINGTON, (KS-Z010) MARSHALL, (KS-Z011) NEMAHA, (KS-Z012) BROWN, (KS-Z020) CLOUD, (KS-Z021) CLAY, (KS-Z022) RILEY, (KS-Z023) POTTAWATOMIE, (KS-Z024) JACKSON, (KS-Z026) JEFFERSON, (KS-Z034) OTTAWA, (KS-Z035) DICKINSON, (KS-Z036) GEARY, (KS-Z037) MORRIS, (KS-Z038) WABAUNSEE, (KS-Z039) SHAWNEE, (KS-Z040) DOUGLAS, (KS-Z054) LYON, (KS-Z055) OSAGE, (KS-Z056) FRANKLIN, (KS-Z058) COFFEY, (KS-Z059) ANDERSON

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Dry conditions continued across all of the central plains through the month of November. Drought monitor for the central plains indicated that some improvement in the drought conditions were experienced across all of northeast Kansas. The month started with a majority of the area in D3 (extreme) drought, but ended with a large portion of the area being downgraded to D2 (severe) drought.

OTTAWA COUNTY --- TESCOTT [39.02, -97.88]

11/10/12 19:25 CST	0	Thunderstorm Wind (EG 52 kt)
11/10/12 19:28 CST	0	Source: Trained Spotter

A trained spotter near Tescott reported a 60 mph wind gust.

OTTAWA COUNTY --- 0.9 SE MINNEAPOLIS [39.12, -97.71]

11/10/12 19:43 CST	0	Thunderstorm Wind (EG 52 kt)
11/10/12 19:46 CST	0	Source: Law Enforcement

Law enforcement near Minneapolis reported a 60 mph wind gust.

OTTAWA COUNTY --- 1.3 ESE MINNEAPOLIS [39.12, -97.70]

11/10/12 19:52 CST	0	Thunderstorm Wind (MG 50 kt)
11/10/12 19:55 CST	0	Source: Trained Spotter

A trained spotter reported a measured 58 mph wind gust near Minneapolis.

CLAY COUNTY --- 3.4 SE OAK HILL [39.22, -97.28]

11/10/12 20:08 CST	0	Thunderstorm Wind (EG 52 kt)
11/10/12 20:11 CST	0	Source: Trained Spotter

A trained spotter near Oak Hill reported a 60 mph wind gust.

RILEY COUNTY --- 5.1 WNW MARIADAH [39.52, -96.75]

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/10/12 20:44 CST		5K	Thunderstorm Wind (EG 61 kt)
	11/10/12 20:47 CST		0	Source: Trained Spotter

A spotter reported shingle blown off of the room and the front door window and encasement was blown in near Randolph in Riley County.

On November 10, 2012 a line of thunderstorms formed in western and central Kansas and moved eastward into north central Kansas. These storms produced strong winds main in Ottawa, Clay, and Riley Counties as storm spotters reported 60 mph winds. The only damage that was reported was to a residence near Randolph where shingles were blown off of the roof, the front door window was broken, and the encasement was blown in.

KANSAS, Extreme Southeast

(KS-Z073) BOURBON, (KS-Z097) CRAWFORD, (KS-Z101) CHEROKEE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Despite appreciable rainfall earlier in the fall season, November was drier than normal which has kept drought conditions across southeast Kansas.

KANSAS, North Central

(KS-Z005) PHILLIPS, (KS-Z006) SMITH, (KS-Z007) JEWELL, (KS-Z017) ROOKS, (KS-Z018) OSBORNE, (KS-Z019) MITCHELL

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

According to the U.S. Drought Monitor, November marked the sixth consecutive month of severe (or worse) drought across this six-county portion of North Central Kansas, as the summer and fall of 2012 continued marking its place in history as one of the worst droughts in several decades. Although damage to the primary 2012 crop season had already been done before the month began, November actually registered as the driest month since May in terms of percent-of-normal precipitation. Throughout the month, all six counties remained under a federally-designated drought disaster and also a state-issued drought emergency. According to U.S. Drought Monitor weekly issuances, category D4 exceptional drought (the worst-possible classification) remained firmly in place across Phillips and Rooks counties along with the majority of Smith and Osborne counties. Farther east, a mix of category D2 severe and category D3 extreme drought persisted in Jewell and Mitchell Counties. Taking a closer look at November precipitation, the vast majority of the six-county area measured less than 0.25-inch, compared to November normals generally between 0.85-1.25." In fact, several NWS cooperative observer sites measured zero precipitation for the month, including those in or near Long Island, Logan, Plainville and Palco. On the "wetter" side of things, Smith Center (0.36") and Lebanon (0.51") were the only cooperative observer sites to report more than one-quarter inch for the month, all of which fell during thunderstorms on the 10th.

Over the longer range period from May through late November, most of North Central Kansas only received between 35-60 percent of normal precipitation. As just one example, Logan measured only 6.43" during this nearly six month span...or 38% of the normal amount of 16.99". For the week ending November 18th, the Kansas Crop Progress and Condition Report from the USDA indicated that topsoil moisture across the north central district rated 63% short to very short, a 14% degradation versus five weeks prior. Subsoil moisture in the north central district rated 83% short to very short. Across the state as a whole, 18% of the emerging winter wheat crop rated poor to very poor, 46% fair and only 30% good to excellent. State-averaged range and pasture conditions were reportedly 81% poor to very poor, holding firm as the worst conditions since rating began in 1995. Both hay and stock water supplies remained around 70 percent short to very short, values which had held fairly steady for the past three to four months.

KANSAS, Northeast

(KS-Z025) ATCHISON, (KS-Z057) MIAMI, (KS-Z060) LINN, (KS-Z102) DONIPHAN, (KS-Z103) LEAVENWORTH, (KS-Z104) WYANDOTTE, (KS-Z105) JOHNSON

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The drought continued across the area during the month of November. Slight improvement was noted, with D1 to D2 conditions prevailing. However, a small portion of western Leavenworth County had D3 conditions. Rainfall deficits for the year were generally in the 10 to 16 inch range.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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KANSAS, Northwest

(KS-Z001) CHEYENNE, (KS-Z002) RAWLINS, (KS-Z003) DECATUR, (KS-Z004) NORTON, (KS-Z013) SHERMAN, (KS-Z014) THOMAS, (KS-Z015) SHERIDAN, (KS-Z016) GRAHAM, (KS-Z027) WALLACE, (KS-Z028) LOGAN, (KS-Z029) GOVE, (KS-Z041) GREELEY, (KS-Z042) WICHITA	11/01/12 00:00 CST	0	0	Drought
	11/30/12 23:59 CST	0	0	

(KS-Z001) CHEYENNE, (KS-Z002) RAWLINS, (KS-Z003) DECATUR, (KS-Z004) NORTON, (KS-Z013) SHERMAN, (KS-Z014) THOMAS, (KS-Z015) SHERIDAN, (KS-Z016) GRAHAM, (KS-Z027) WALLACE, (KS-Z028) LOGAN, (KS-Z029) GOVE, (KS-Z041) GREELEY, (KS-Z042) WICHITA	11/01/12 00:00 MST	0	0	Drought
	11/30/12 23:59 MST	0	0	

Drought conditions continued from October with all of northwest Kansas rated as being in Exceptional (D4) Drought. No precipitation fell in northwest Kansas during the month of November. Year-to-date precipitation through the end of November averaged 40% to 75% of normal.

(KS-Z014) THOMAS, (KS-Z015) SHERIDAN, (KS-Z027) WALLACE, (KS-Z028) LOGAN, (KS-Z029) GOVE, (KS-Z041) GREELEY, (KS-Z042) WICHITA	11/10/12 10:00 MST	0	0	High Wind (MAX 57 kt)
	11/10/12 15:00 MST	0	0	

(KS-Z014) THOMAS, (KS-Z015) SHERIDAN, (KS-Z027) WALLACE, (KS-Z028) LOGAN, (KS-Z029) GOVE, (KS-Z041) GREELEY, (KS-Z042) WICHITA	11/10/12 11:00 CST	0	0	High Wind (MAX 57 kt)
	11/10/12 16:00 CST	0	0	

Strong southwest winds developed ahead of a cold front, with gusts reaching 50 to 60 mph across much of western Kansas. Areas of blowing dirt reduced visibility to between one-half and one mile at times.

KANSAS, Southeast

(KS-Z032) RUSSELL, (KS-Z033) LINCOLN, (KS-Z047) BARTON, (KS-Z048) ELLSWORTH, (KS-Z049) SALINE, (KS-Z050) RICE, (KS-Z051) MCPHERSON, (KS-Z052) MARION, (KS-Z053) CHASE, (KS-Z067) RENO, (KS-Z068) HARVEY, (KS-Z069) BUTLER, (KS-Z070) GREENWOOD, (KS-Z071) WOODSON, (KS-Z072) ALLEN, (KS-Z082) KINGMAN, (KS-Z083) SEDGWICK, (KS-Z091) HARPER, (KS-Z092) SUMNER, (KS-Z093) COWLEY, (KS-Z094) ELK, (KS-Z095) WILSON, (KS-Z096) NEOSHO, (KS-Z098) CHAUTAUQUA, (KS-Z099) MONTGOMERY, (KS-Z100) LABETTE	11/01/12 00:00 CST	0	0	Drought
	11/30/12 23:59 CST	0	0	

A prolonged period of dry weather continued the drought conditions across most of Kansas during the month of November. An unusually dry period from May through September kept an extreme drought (D3) going for most of Southern Kansas. Portions of Central Kansas continued to stay very dry, with exceptional drought (D4) conditions for most of the month of November. Most areas did see some rainfall in the middle of the month, with significant rainfall bringing almost an inch to portions of Central Kansas. This led to some gradual improvement over portions of Central Kansas, from an exceptional drought (D4) to an extreme drought (D3).

BARTON COUNTY --- 3.4 NW HOISINGTON [38.55, -98.82]	11/10/12 18:07 CST	0	0	Hail (1.75 in)
	11/10/12 18:07 CST	0	0	Source: Trained Spotter

Wind gusts to 60 mph accompanied the large hail.

BARTON COUNTY --- 3.4 NW HOISINGTON [38.55, -98.82]	11/10/12 18:07 CST	0	0	Thunderstorm Wind (EG 52 kt)
	11/10/12 18:07 CST	0	0	Source: Trained Spotter

Golfball sized hail accompanied the strong wind gusts.

BARTON COUNTY --- 0.5 W HOISINGTON [38.52, -98.78]				
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Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/10/12 18:09 CST		0	Hail (1.00 in)
	11/10/12 18:09 CST		0	Source: Law Enforcement
BARTON COUNTY --- 0.5 E HOISINGTON [38.52, -98.76]				
	11/10/12 18:14 CST		0	Hail (1.00 in)
	11/10/12 18:14 CST		0	Source: Trained Spotter
BARTON COUNTY --- 0.7 S BEAVER [38.62, -98.65]				
	11/10/12 18:20 CST		0	Thunderstorm Wind (EG 61 kt)
	11/10/12 18:20 CST		0	Source: Trained Spotter
The strong winds were reported by a trained spotter.				
ELLSWORTH COUNTY --- 6.8 NNW HOLYROOD [38.67, -98.45]				
	11/10/12 18:37 CST		0	Hail (1.75 in)
	11/10/12 18:37 CST		0	Source: Law Enforcement
Wind gusts to 80 mph accompanied the large hail.				
ELLSWORTH COUNTY --- 6.8 NNW HOLYROOD [38.67, -98.45]				
	11/10/12 18:37 CST		0	Thunderstorm Wind (EG 70 kt)
	11/10/12 18:37 CST		0	Source: Law Enforcement
The strong winds were accompanied by golfball size hail.				
ELLSWORTH COUNTY --- 0.9 NW HOLYROOD [38.59, -98.41]				
	11/10/12 18:58 CST		0	Hail (1.00 in)
	11/10/12 18:58 CST		0	Source: Trained Spotter
ELLSWORTH COUNTY --- 2.1 N ELLSWORTH [38.76, -98.23]				
	11/10/12 18:58 CST		0	Hail (1.00 in)
	11/10/12 18:58 CST		0	Source: Trained Spotter
RICE COUNTY --- 0.6 SSE BUSHTON [38.51, -98.40]				
	11/10/12 19:03 CST		7.50K	Thunderstorm Wind (EG 61 kt)
	11/10/12 19:03 CST		0	Source: Public
A carport was damaged and blown over into a house. Report relayed from social media.				
ELLSWORTH COUNTY --- 2.1 SW KANAPOLIS RES [38.63, -98.06]				
	11/10/12 19:17 CST		0	Hail (0.88 in)
	11/10/12 19:17 CST		0	Source: Trained Spotter
RICE COUNTY --- 0.5 E RAYMOND [38.28, -98.41]				
	11/10/12 20:01 CST		0	Hail (1.00 in)
	11/10/12 20:01 CST		0	Source: Law Enforcement
Wind gusts to 60 mph were also reported with the large hail.				
RICE COUNTY --- 0.5 E RAYMOND [38.28, -98.41]				
	11/10/12 20:01 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 20:01 CST		0	Source: Law Enforcement
Large hail to quarter size was also reported.				
RICE COUNTY --- 1.5 NNW STERLING [38.24, -98.21]				
	11/10/12 20:16 CST		0	Thunderstorm Wind (EG 61 kt)
	11/10/12 20:16 CST		0	Source: Storm Chaser
The strong wind gusts were reported by a storm chaser.				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
RICE COUNTY --- LYONS [38.35, -98.20]	11/10/12 20:17 CST		0	Hail (1.00 in)
	11/10/12 20:17 CST		0	Source: Law Enforcement
Strong wind gusts to 60 mph were also reported.				
RICE COUNTY --- LYONS [38.35, -98.20]	11/10/12 20:17 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 20:17 CST		0	Source: Law Enforcement
Large hail to quarter size was also reported.				
MCPHERSON COUNTY --- 0.5 W WINDOM [38.38, -97.91]	11/10/12 20:34 CST		0	Thunderstorm Wind (MG 63 kt)
	11/10/12 20:34 CST		0	Source: Mesonet
Reported by the KSN Weatherlab.				
MCPHERSON COUNTY --- MARQUETTE [38.55, -97.83]	11/10/12 20:45 CST		0	Hail (0.88 in)
	11/10/12 20:45 CST		0	Source: Law Enforcement
MCPHERSON COUNTY --- 0.7 S LINDBORG [38.57, -97.67]	11/10/12 20:49 CST		0	Hail (0.88 in)
	11/10/12 20:49 CST		0	Source: Trained Spotter
Strong wind gusts to 60 mph accompanied the hail.				
MCPHERSON COUNTY --- 0.7 S LINDBORG [38.57, -97.67]	11/10/12 20:49 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 20:49 CST		0	Source: Trained Spotter
Hail to nickel size was also reported.				
NEOSHO COUNTY --- 0.6 W (CNU)JOHNSON ARPT CH [37.67, -95.49]	11/11/12 05:10 CST		0	Thunderstorm Wind (MG 57 kt)
	11/11/12 05:10 CST		0	Source: ASOS
NEOSHO COUNTY --- 7.9 E CHANUTE [37.68, -95.33]	11/11/12 05:16 CST		3K	Thunderstorm Wind (EG 60 kt)
	11/11/12 05:16 CST		0	Source: Law Enforcement
A metal shed was blown over.				
Showers and thunderstorms developed along the convergence of a cold frontal boundary and dry line. This late season storm system was very vigorous for this late in the season. Several discrete supercells and bowing line segments developed and produced reports of quarter sized hail and damaging wind gusts to 80 mph across portions of Central Kansas.				

KANSAS, Southwest

(KS-Z043) SCOTT, (KS-Z061) HAMILTON, (KS-Z062) KEARNY, (KS-Z063) FINNEY, (KS-Z075) GRANT, (KS-Z076) HASKELL

11/10/12 09:30 CST	0	High Wind (MAX 62 kt)
11/10/12 15:00 CST	0	

An upper jet moving through the southern Rockies helped to create strong surface pressure falls across northeast Colorado. The strength of the surface pressure falls, the resultant gradient and depth of superadiabatic mixed layer produced strong southwest surface winds.

Deep shear became impressive and with a moistening airmass thunderstorms quickly developed and became briefly supercellular

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
before creating a broken line segments into central Kansas.				
FORD COUNTY --- 0.9 NE DODGE CITY [37.76, -100.01]				
	11/10/12 16:41 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 16:41 CST		0	Source: Public
Winds were estimated to be gusting to 60 MPH.				
PAWNEE COUNTY --- 4.5 WNW ASH VALLEY [38.32, -99.30]				
	11/10/12 17:25 CST		0	Thunderstorm Wind (EG 61 kt)
	11/10/12 17:25 CST		0	Source: Storm Chaser
Winds were estimated to be 70 MPH.				
FORD COUNTY --- 2.1 S BELLEFONT [37.84, -99.65]				
	11/10/12 17:30 CST		0	Hail (1.00 in)
	11/10/12 17:30 CST		0	Source: Trained Spotter
FORD COUNTY --- 2.1 S BELLEFONT [37.84, -99.65]				
	11/10/12 17:30 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 17:30 CST		0	Source: Trained Spotter
Winds were estimated to be 60 MPH.				
FORD COUNTY --- 3.3 ENE BELLEFONT [37.88, -99.59]				
	11/10/12 17:33 CST		0	Hail (1.00 in)
	11/10/12 17:33 CST		0	Source: Public
EDWARDS COUNTY --- 0.9 NE OFFERLE [37.89, -99.54]				
	11/10/12 17:42 CST		0	Hail (0.75 in)
	11/10/12 17:42 CST		0	Source: Law Enforcement
Winds were also gusting to 60 MPH as the hail fell.				
EDWARDS COUNTY --- 0.9 NE OFFERLE [37.89, -99.54]				
	11/10/12 17:42 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 17:42 CST		0	Source: Law Enforcement
Dime sized hail accompanied the wind.				
COMANCHE COUNTY --- 0.9 SW COLDWATER [37.26, -99.34]				
	11/10/12 17:55 CST		0	Hail (1.00 in)
	11/10/12 17:55 CST		0	Source: Storm Chaser
EDWARDS COUNTY --- 1.3 WNW ARDELL [37.89, -99.52]				
	11/10/12 17:55 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 17:55 CST		0	Source: Public
Hail smaller than pea size was also reported with the wind.				
KIOWA COUNTY --- 3.0 SSW WELLSFORD [37.58, -99.05]				
	11/10/12 18:14 CST		0	Hail (0.88 in)
	11/10/12 18:14 CST		0	Source: Public
Winds were estimated to be 60 MPH as the hail fell.				
KIOWA COUNTY --- 3.0 SSW WELLSFORD [37.58, -99.05]				
	11/10/12 18:14 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 18:14 CST		0	Source: Public
There was also nickel sized hail.				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
EDWARDS COUNTY --- 3.5 S NETTLETON [37.93, -99.32]				
	11/10/12 18:27 CST		0	Thunderstorm Wind (EG 56 kt)
	11/10/12 18:27 CST		0	Source: Public
Winds were estimated to be 65 MPH.				
FORD COUNTY --- 3.6 ENE BUCKLIN [37.57, -99.57]				
	11/10/12 18:32 CST		0	Hail (0.88 in)
	11/10/12 18:32 CST		0	Source: Public
FORD COUNTY --- 3.0 SSE BUCKLIN [37.51, -99.61]				
	11/10/12 18:36 CST		0	Hail (0.75 in)
	11/10/12 18:36 CST		0	Source: Public
CLARK COUNTY --- 8.6 SE CLARK STATE LAKE [37.31, -99.65]				
	11/10/12 19:00 CST		0	Hail (0.88 in)
	11/10/12 19:00 CST		0	Source: Public
STAFFORD COUNTY --- 0.5 E RADIUM [38.17, -98.89]				
	11/10/12 19:00 CST		0	Thunderstorm Wind (EG 56 kt)
	11/10/12 19:00 CST		0	Source: Law Enforcement
A dilapidated garage at the Senior Center was knocked down by the wind.				
CLARK COUNTY --- 5.3 NNE CLARK STATE LAKE [37.45, -99.74]				
	11/10/12 19:15 CST		0	Hail (0.88 in)
	11/10/12 19:15 CST		0	Source: Public
STAFFORD COUNTY --- 2.2 W ST JOHN SCHULZ ARPT [38.05, -98.82]				
	11/10/12 19:32 CST		0	Hail (0.88 in)
	11/10/12 19:32 CST		0	Source: Public
COMANCHE COUNTY --- 5.6 NW COLDWATER [37.32, -99.41]				
	11/10/12 19:40 CST		0	Hail (0.75 in)
	11/10/12 19:40 CST		0	Source: Law Enforcement
The hail covered the ground.				
STAFFORD COUNTY --- 2.3 WSW HUDSON [38.09, -98.71]				
	11/10/12 19:42 CST		0	Hail (1.00 in)
	11/10/12 19:42 CST		0	Source: Public
An upper jet moving through the southern Rockies helped to create strong surface pressure falls across northeast Colorado. The strength of the surface pressure falls, the resultant gradient and depth of superadiabatic mixed layer produced strong southwest surface winds.				
Deep shear became impressive and with a moistening airmass thunderstorms quickly developed and became briefly supercellular before creating a broken line segments into central Kansas.				
KENTUCKY, Southwest				
(KY-Z001) FULTON, (KY-Z002) HICKMAN, (KY-Z003) CARLISLE, (KY-Z004) BALLARD, (KY-Z005) MCCracken, (KY-Z006) GRAVES, (KY-Z007) LIVINGSTON, (KY-Z008) MARSHALL, (KY-Z009) CALLOWAY, (KY-Z010) CRITTENDEN, (KY-Z011) LYON, (KY-Z012) TRIGG, (KY-Z013) CALDWELL, (KY-Z014) UNION, (KY-Z015) WEBSTER, (KY-Z016) HOPKINS, (KY-Z018) HENDERSON				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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There was slight improvement in long-term drought conditions during the month of November. Rainfall was below normal during the month, but this deficit was partially offset by low evaporation rates caused by unseasonably cool air. The drought officially ended along and east of a Marion to Princeton to Cadiz line. The area of severe drought conditions persisted along and west of the Kentucky Lake region. The remainder of the drought area was classified as moderate. The main impact of the long-term drought was on farm ponds used for irrigating fields or raising livestock. Soil moisture was near normal. Some pastures remained in poor or very poor condition, but many of them improved to adequate condition. Streamflows were running about normal. At Paducah, November rainfall was 2.04 inches, which was 2.26 inches below normal. The year-to-date rainfall deficit hovered around 18 inches. The drought began in May and continued into December in most areas.

(KY-Z001) FULTON, (KY-Z002) HICKMAN, (KY-Z003) CARLISLE, (KY-Z004) BALLARD, (KY-Z005) MCCracken, (KY-Z006) GRAVES, (KY-Z007) LIVINGSTON, (KY-Z008) MARSHALL, (KY-Z009) CALLOWAY, (KY-Z010) CRITTENDEN, (KY-Z011) LYON, (KY-Z012) TRIGG, (KY-Z013) CALDWELL, (KY-Z014) UNION, (KY-Z015) WEBSTER, (KY-Z016) HOPKINS, (KY-Z017) CHRISTIAN, (KY-Z020) MCLEAN, (KY-Z021) MUHLENBERG, (KY-Z022) TODD	11/08/12 04:00 CST	0	Dense Fog
	11/08/12 07:00 CST	0	

Widespread dense fog reduced visibility to one-quarter mile or less across most of western Kentucky except the Owensboro and Henderson areas. Surface high pressure was centered over the lower and mid Mississippi Valley, which resulted in clear and calm conditions conducive to dense fog.

(KY-Z003) CARLISLE, (KY-Z004) BALLARD, (KY-Z005) MCCracken	11/21/12 01:00 CST	0	Dense Fog
	11/21/12 07:00 CST	0	

Widespread dense fog reduced visibility to one-quarter mile or less from Paducah westward. Surface high pressure was centered over the mid Mississippi Valley, which resulted in clear and calm conditions conducive to dense fog.

(KY-Z001) FULTON, (KY-Z002) HICKMAN, (KY-Z003) CARLISLE, (KY-Z004) BALLARD, (KY-Z005) MCCracken, (KY-Z007) LIVINGSTON, (KY-Z010) CRITTENDEN, (KY-Z014) UNION, (KY-Z018) HENDERSON, (KY-Z019) DAVIESS	11/22/12 04:00 CST	0	Dense Fog
	11/22/12 07:00 CST	0	

Widespread dense fog blanketed the Ohio and Mississippi River counties of western Kentucky. Visibility was one-quarter mile or less. High pressure over the central Appalachian Mountains produced a light south wind flow of moist air, which contributed to the dense fog.

LAKE MICHIGAN

WILMETTE HARBOR TO NORTHERLY ISLAND IL COUNTY --- HARRISON-DEVER CRIB [41.92, -87.57]	11/11/12 16:45 CST	0	Marine High Wind (MG 60 kt)
	11/11/12 16:45 CST	0	Source: C-MAN Station

A cold front swept across the region with strong southerly winds ahead of the front.

LAKE SUPERIOR

MANITOU ISLAND TO MARQUETTE MI AND W OF GRAND MARAIS MI TO US/CANADIAN BORDER BEYOND 5NM OF SHORE COUNTY --- STANNARD ROCK LIGHT [47.18, -87.23]	11/23/12 09:00 EST	0	Marine High Wind (MG 63 kt)
	11/23/12 13:00 EST	0	Source: C-MAN Station

The Stannard Rock C-MAN station observed occasional storm force gusts through the period.

A strong cold front moving across Lake Superior produced storm force winds at Stannard Rock on the 23rd.

LOUISIANA, Northwest

CADDO COUNTY --- 0.9 NW BELCHER [32.76, -93.84], 2.7 ESE CAVETT [32.77, -93.78]

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/11/12 17:15 CST		0	Tornado (EF0, L: 3.26 mi , W: 25 yd)
	11/11/12 17:20 CST		0	Source: NWS Storm Survey

Numerous large limbs were downed in a grove of trees between Highway 71 and 3049 on the north side of Belcher. This tornado tracked east northeast across open farmland to near the end of Belcher River Road, where large limbs were snapped off of a few trees near the end of the road and the levee. The tornado crossed the Red River into western Bossier Parish.

BOSSIER COUNTY --- 3.8 W ALDEN BRIDGE [32.77, -93.78], HUGHES [32.78, -93.72]				
	11/11/12 17:20 CST		0	Tornado (EF0, L: 3.85 mi , W: 25 yd)
	11/11/12 17:31 CST		0	Source: NWS Storm Survey

This tornado is a continuation of the tornado that first touched down in Caddo Parish. The tornado crossed the Red River into western Bossier Parish, where other large limbs were snapped off several trees on Peace Lane. It remained on the ground snapping other large pine limbs on the west side of Highway 3 just south of the Alden Bridge community, before lifting in a heavily wooded area just south of Highway 160.

CADDO COUNTY --- 0.9 NE BELCHER [32.76, -93.82]				
	11/11/12 17:25 CST		0	Thunderstorm Wind (EG 52 kt)
	11/11/12 17:25 CST		0	Source: NWS Storm Survey

Large limbs were downed on Belcher River Road near the levee.

BOSSIER COUNTY --- 3.2 WSW ALDEN BRIDGE [32.75, -93.77]				
	11/11/12 17:27 CST		0	Thunderstorm Wind (EG 52 kt)
	11/11/12 17:27 CST		0	Source: NWS Storm Survey

Large limbs were downed on Peace Lane north northwest of Benton, Louisiana.

BOSSIER COUNTY --- 1.2 W HUGHES [32.78, -93.74]				
	11/11/12 17:31 CST		0	Thunderstorm Wind (EG 52 kt)
	11/11/12 17:31 CST		0	Source: NWS Storm Survey

Large pine tree limbs were downed on the west side of Hwy. 3 near Alden Bridge about a half mile south of Hwy. 160.

A potent upper level trough moved across the Central Plains, pushing a strong cold front across North Texas and Central Oklahoma and through the Four State Region. Storms began developing ahead of the front along a pre-frontal trough axis across parts of East Texas and slowly propagated eastward. The front eventually merged with the pre-frontal trough, as the storms intensified and continued to push across the area. A tornado was produced by this storm system across Northwest Louisiana as well.

LOUISIANA, Southeast

LIVINGSTON COUNTY --- 4.0 SE DENHAM SPGS [30.44, -90.90]				
	11/05/12 18:57 CST		0	Hail (1.00 in)
	11/05/12 18:57 CST		0	Source: Public

Public report of large hail southeast of Denham Springs received via social media.

LIVINGSTON COUNTY --- DENHAM SPGS [30.48, -90.95]				
	11/05/12 19:02 CST		0	Hail (1.75 in)
	11/05/12 19:02 CST		0	Source: Broadcast Media

Golfball size hail reported in Denham Springs via NWSChat.

A slow moving cold front produced strong to severe thunderstorms during the evening of the 5th.

LOUISIANA, Southwest

CALCASIEU COUNTY --- 3.2 S BUHLER [30.28, -93.38]				
	11/05/12 17:20 CST		1K	Thunderstorm Wind (EG 50 kt)
	11/05/12 17:20 CST		0	Source: NWS Storm Survey

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A trampoline flew 0.17 mile in the air...and hit the side of a mobile home on Avondale Street. The trampoline broke several windows and a sliding glass door, as well as moving the outdoor stairway at least 5 feet and damaging the air conditioner and part of the roof. At least three other mobile homes in the area received minor wind damage such as lost shingles or lost siding. One tree was blown down and two camping trailer were blown off their blocks.

CALCASIEU COUNTY --- 2.8 SSE BUHLER [30.29, -93.36]

11/05/12 17:29 CST	0	Hail (1.00 in)
11/05/12 17:29 CST	0	Source: Fire Department/Rescue

Lake Charles fire department reported quarter size hail on highway 27 and Houston River Road.

CALCASIEU COUNTY --- 1.5 NNW WESTLAKE [30.25, -93.26]

11/05/12 17:30 CST	0	Funnel Cloud
11/05/12 17:30 CST	0	Source: Public

The Red Cross reported a possible funnel cloud over Westlake as a severe thunderstorm moved through the area.

CALCASIEU COUNTY --- 3.2 S WESTLAKE [30.18, -93.25], 1.9 SSE LAKE CHARLES MUNI AR [30.09, -93.21]

11/05/12 17:35 CST	0	Hail (1.25 in)
11/05/12 17:50 CST	0	Source: NWS Employee

Multiple reports were received from off-duty NWS employees, a NWS volunteer, the Calcasieu Parish emergency manager, and the public of hail ranging in size from pea to half dollars.

CALCASIEU COUNTY --- (LCH)LK CHARLES MUNI [30.13, -93.22]

11/05/12 17:40 CST	1K	Thunderstorm Wind (MG 60 kt)
11/05/12 17:40 CST	0	Source: ASOS

The Lake Charles Regional Airport ASOS (KLCH) reported a wind gust of 69 MPH with a passing storm. NWS employees at the office observed hail with one inch in diameter with the storm as well. A tree was also reported down and leaning on a building along Country Club Road during this storm.

LAFAYETTE COUNTY --- BROUSSARD [30.15, -91.97]

11/05/12 18:25 CST	2K	Thunderstorm Wind (EG 50 kt)
11/05/12 18:40 CST	0	Source: Law Enforcement

The Lafayette Sheriffs Office reported numeorus trees and signs blown down around Broussard from a a passing severe storm. KATC reported an 18 wheeler blown over and onto a sign along highway 90 in Broussard.

ST. MARTIN COUNTY --- ST MARTINVILLE [30.13, -91.83]

11/05/12 18:40 CST	0	Thunderstorm Wind (EG 50 kt)
11/05/12 18:40 CST	0	Source: Public

Reports were received via the spotter network of hail the size of quarters in the Saint Martinville area. Winds of 40 MPH and small branches down was also repoted.

A severe thunderstorm affects the Lake Charles area while multiple storms affect South Central Louisiana with hail and high winds.

MAINE, South

SOMERSET COUNTY --- 0.4 SSE SKOWHEGAN [44.76, -69.72], 0.4 SSE SKOWHEGAN [44.77, -69.72], 0.4 SSE SKOWHEGAN [44.76, -69.72], 0.4 SSE SKOWHEGAN [44.76, -69.72], 0.4 SSE SKOWHEGAN [44.76, -69.72]

11/01/12 00:00 EST	0	Flood (due to Heavy Rain)
11/01/12 08:00 EST	0	Source: Official NWS Observations

The remnants of Hurricane Sandy produced 3 to 6 inches of rainfall resulting in minor flooding on the Kennebec River at Skowhegan. Very minor flooding persisted for about 8 hours into November.

The remnants of Hurricane Sandy produced 3 to 6 inches of rainfall resulting in minor flooding on the Swift River at Roxbury and the Kennebec River at Skowhegan. Flooding along the Kennebec persisted for about 8 hours into November.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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MARYLAND, Central

(MD-Z014) ANNE ARUNDEL

11/05/12 06:00 EST	0	Frost/Freeze
11/05/12 08:30 EST	0	

High pressure over the Mid Atlantic led to temperatures to drop below freezing overnight.

(MD-Z004) FREDERICK, (MD-Z005) CARROLL, (MD-Z006) NORTHERN BALTIMORE, (MD-Z007) HARFORD, (MD-Z009) MONTGOMERY, (MD-Z010) HOWARD, (MD-Z011) SOUTHERN BALTIMORE, (MD-Z013) PRINCE GEORGES, (MD-Z014) ANNE ARUNDEL, (MD-Z016) CHARLES, (MD-Z017) ST. MARY'S, (MD-Z018) CALVERT

11/06/12 01:00 EST	0	Frost/Freeze
11/06/12 08:30 EST	0	

High pressure over the Mid Atlantic led to temperatures to drop below freezing overnight.

(MD-Z003) WASHINGTON, (MD-Z502) CENTRAL AND EASTERN ALLEGANY

11/21/12 03:00 EST	0	Dense Fog
11/21/12 10:30 EST	0	

High pressure stretched along the entire eastern seaboard overnight and into the morning. Fog formed in areas of calm winds and temperatures near freezing in the MD/VA Piedmont and valleys west of the Allegheny Front.

MASSACHUSETTS, Central and East

(MA-Z018) WESTERN PLYMOUTH, (MA-Z019) EASTERN PLYMOUTH, (MA-Z020) SOUTHERN BRISTOL, (MA-Z021) SOUTHERN PLYMOUTH, (MA-Z022) BARNSTABLE, (MA-Z023) DUKES, (MA-Z024) NANTUCKET

11/07/12 14:05 EST	0.19M	High Wind (MAX 56 kt)
11/08/12 06:22 EST	0	

(MA-Z004) NORTHERN WORCESTER, (MA-Z006) WESTERN ESSEX, (MA-Z011) EASTERN HAMPDEN, (MA-Z012) SOUTHERN WORCESTER, (MA-Z013) WESTERN NORFOLK, (MA-Z014) SOUTHEAST MIDDLESEX, (MA-Z017) NORTHERN BRISTOL, (MA-Z020) SOUTHERN BRISTOL

11/07/12 15:00 EST	0	Winter Weather
11/08/12 21:00 EST	0	

Low pressure moved up the east coast spreading snow, rain, and wind across southern New England. Cloudy skies coupled with evaporational cooling to keep temperatures cooler than expected which resulted in snow spread across all but the south coasts of RI and MA as well as portions of southeastern MA. This in turn resulted in higher snow accumulations across much of southern New England. In Massachusetts, accumulations ranged from less than an inch to nine inches.

MICHIGAN, North

(MI-Z021) ANTRIM, (MI-Z027) KALKASKA, (MI-Z028) CRAWFORD, (MI-Z034) ROSCOMMON

11/23/12 17:00 EST	0	Winter Storm
11/24/12 05:00 EST	0	

This was the first substantial lake effect snow event of the season, as strong northwest winds brought in cold air behind a secondary cold front. A dominant lake effect snow band set up on the evening of the 23rd from southern Torch Lake, to just east of the village of Kalkaska, all the way to Higgins Lake. By morning of the 24th, snowfall totals of 10 to 15 inches were common along this narrow band. The highest amount, 15 inches, occurred 5 miles north of Kalkaska. Wind gusts of 30 to 40 mph were common early in the event, making for substantial blowing and drifting concerns.

MICHIGAN, Upper

(MI-Z001) KEWEENAW, (MI-Z002) ONTONAGON, (MI-Z003) NORTHERN HOUGHTON, (MI-Z004) BARAGA

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/12/12 15:00 EST		0	Winter Weather
	11/13/12 08:00 EST		0	

Arctic air spreading over Lake Superior in the wake of a cold front generated moderate lake effect snow from the 12th into the morning of the 13th.

(MI-Z001) KEWEENAW, (MI-Z002) ONTONAGON, (MI-Z003) NORTHERN HOUGHTON, (MI-Z004) BARAGA, (MI-Z005) MARQUETTE, (MI-Z006) ALGER, (MI-Z009) GOGEBIC, (MI-Z084) SOUTHERN HOUGHTON, (MI-Z085) NORTHERN SCHOOLCRAFT	11/22/12 20:00 CST		0	Winter Storm
	11/23/12 17:00 CST		0	

(MI-Z001) KEWEENAW, (MI-Z002) ONTONAGON, (MI-Z003) NORTHERN HOUGHTON, (MI-Z004) BARAGA, (MI-Z005) MARQUETTE, (MI-Z006) ALGER, (MI-Z009) GOGEBIC, (MI-Z084) SOUTHERN HOUGHTON, (MI-Z085) NORTHERN SCHOOLCRAFT	11/22/12 22:00 EST		0	Winter Storm
	11/24/12 07:00 EST		0	

(MI-Z007) LUCE, (MI-Z010) IRON, (MI-Z013) DELTA, (MI-Z014) SOUTHERN SCHOOLCRAFT	11/23/12 00:00 CST		0	Winter Weather
	11/23/12 07:00 CST		0	

(MI-Z007) LUCE, (MI-Z010) IRON, (MI-Z013) DELTA, (MI-Z014) SOUTHERN SCHOOLCRAFT	11/23/12 02:00 EST		0	Winter Weather
	11/24/12 07:00 EST		0	

Black Friday turned snow white as a strong cold front moving across Lake Superior produced moderate to heavy lake effect snow showers over portions of west and central Upper Michigan. Strong north to northwest winds gusting from 35 to near 50 mph also created areas of blowing snow and occasional whiteout conditions.

(MI-Z003) NORTHERN HOUGHTON, (MI-Z009) GOGEBIC, (MI-Z085) NORTHERN SCHOOLCRAFT	11/25/12 13:00 EST		0	Winter Weather
	11/26/12 18:00 EST		0	

(MI-Z003) NORTHERN HOUGHTON, (MI-Z009) GOGEBIC, (MI-Z085) NORTHERN SCHOOLCRAFT	11/25/12 14:00 CST		0	Winter Weather
	11/26/12 13:00 CST		0	

(MI-Z006) ALGER	11/25/12 16:00 EST		0	Lake-Effect Snow
	11/26/12 18:00 EST		0	

Cold Arctic air moving across Lake Superior generated moderate to heavy lake effect snow over portions of west and north central Upper Michigan on the 25th and 26th.

MINNESOTA, Central and South Central

HENNEPIN COUNTY --- 1.8 ENE BROOKLYN CENTER [45.06, -93.32]	11/10/12 05:20 CST		0	Hail (1.00 in)
	11/10/12 05:21 CST		0	Source: Public

A video from the public contained information of quarter size hail that fell near Brooklyn Center, Minnesota.

ANOKA COUNTY --- FRIDLEY [45.08, -93.25], 1.5 S SPRING LAKE PARK [45.10, -93.23]	11/10/12 05:22 CST		0	Hail (1.00 in)
	11/10/12 05:24 CST		0	Source: Public

A video from the public contained information of quarter size hail that fell from Fridley, to near Spring Lake Park, Minnesota.

ANOKA COUNTY --- 0.9 NNE BLAINE [45.19, -93.21]

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/10/12 05:25 CST		0	Hail (0.75 in)
	11/10/12 05:25 CST		0	Source: Emergency Manager

A few strong thunderstorms developed across southern Minnesota during the early morning of Saturday, November 10th. These storms tracked northeast across the Twin Cities after 5 am, and produced a few hail stones up to quarter size near Brooklyn Center, Fridley, and Spring Lake Park.

LE SUEUR COUNTY --- 1.1 SSE NEW PRAGUE [44.54, -93.56]

11/10/12 22:38 CST	1K	Thunderstorm Wind (EG 50 kt)
11/10/12 22:38 CST	0	Source: NWS Employee

Roof and siding damage occurred at a home in New Prague.

DAKOTA COUNTY --- 3.6 SSE BURNSVILLE [44.75, -93.30], 3.8 ESE BURNSVILLE [44.77, -93.25]

11/10/12 22:58 CST	0.15M	Tornado (EF0, L: 2.80 mi , W: 100 yd)
11/10/12 23:01 CST	0	Source: NWS Storm Survey

An EF-0 tornado developed northeast of the intersection of County Road 5 and McAndrews Road, and tracked northeast to just southwest of the intersection of Burnsville Parkway and County Road 11. A large area of uprooted trees and power lines occurred along a non-continuous broken path of 2.8 miles in a heavily populated region of Burnsville. The worst damage occurred in a two block area between Knoll Lane and Nicollet Avenue, and Nicollet Jr High School.

DAKOTA COUNTY --- 2.0 S MENDOTA [44.85, -93.17], 1.5 S MENDOTA [44.86, -93.17]

11/10/12 23:05 CST	50K	Tornado (EF0, L: 0.50 mi , W: 50 yd)
11/10/12 23:06 CST	0	Source: NWS Storm Survey

A brief EF-0 tornado spun up near Skyline Drive, east of Highway 13, and tracked north-northeast to the Lost Spur Golf Course just south of Interstate 494. The tornado tracked for two blocks in a heavily wooded residential area before moving across a small golf course as it dissipated. Numerous large trees and power lines were blown down along the path of approximately one-half mile.

DAKOTA COUNTY --- 1.5 S MENDOTA [44.86, -93.17], 1.1 SSW MENDOTA HGTS [44.87, -93.16]

11/10/12 23:06 CST	0.10M	Thunderstorm Wind (EG 56 kt)
11/10/12 23:07 CST	0	Source: NWS Storm Survey

A storm survey revealed that straight line winds of 65 mph were associated with the rear flank downdraft from the tornado that dissipated at the Lost Spur Golf Course. These severe winds blew shingles off a hotel roof and knocked down trees from near Interstate 494 and Pilot Knob Road, northeast to a business community.

DAKOTA COUNTY --- 0.8 NNW MENDOTA HGTS [44.89, -93.15], 0.3 SE LILYDALE [44.91, -93.13]

11/10/12 23:08 CST	0	Thunderstorm Wind (EG 61 kt)
11/10/12 23:10 CST	0	Source: NWS Storm Survey

About two dozen trees were downed from Mendota to Lilydale, for about two miles along Highway 13, and on either side of Interstate 35E. The trees were all oriented from southwest to northeast, and there was no concentrated area of damage. The damage was most likely due to rear flank downdraft winds.

DAKOTA COUNTY --- 1.0 E MENDOTA HGTS [44.88, -93.13], 1.5 ENE LILYDALE [44.92, -93.10]

11/10/12 23:09 CST	0.25M	Thunderstorm Wind (EG 61 kt)
11/10/12 23:13 CST	0	Source: NWS Storm Survey

A storm survey indicated a large downburst damage swath with numerous downed trees in the northeastern section of Mendota Heights, and the northern portion of West St. Paul. A large part of the damage pattern across northeastern Mendota Heights and West St. Paul was directed toward the east, northeast and north. It was a very standard pattern of downburst winds. Many of the trees landed on homes, cars and garages. Some of the garages were pushed off their foundations. Some of the most significant downburst damage was in a 5-10 block area surrounding Dodd Road, Delaware and Smith Avenue.

DAKOTA COUNTY --- 0.4 SE LILYDALE [44.91, -93.12], 0.7 E LILYDALE [44.91, -93.12]

11/10/12 23:10 CST	0.10M	Tornado (EF0, L: 0.54 mi , W: 50 yd)
11/10/12 23:11 CST	0	Source: NWS Storm Survey

A brief EF-0 tornado developed east of Lilydale, just southeast of the intersection of Highway 13 and Wachtler Avenue. It tracked northeast across a subdivision in extreme northern Mendota Heights. Several dozen large trees were blown down onto homes, cars and sheds.

RAMSEY COUNTY --- 4.4 SE ST PAUL [44.92, -93.10], 5.0 ESE ST PAUL [44.93, -93.06]

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/10/12 23:13 CST		50K	Thunderstorm Wind (EG 56 kt)
	11/10/12 23:16 CST		0	Source: NWS Storm Survey

This is a continuation in Ramsey County of the wind damage that hit Mendota Heights and West St. Paul in Dakota County. It tracked northeast across south central St Paul, from Smith and Annapolis to St Paul Holman Field, but damage was more sporadic than when it hit Dakota County. Most of the damage was due to trees landing on cars, houses and sheds.

RAMSEY COUNTY --- 4.8 ESE ST PAUL [44.94, -93.06]

11/10/12 23:16 CST	0	Thunderstorm Wind (MG 61 kt)
11/10/12 23:16 CST	0	Source: ASOS

Measured at St Paul Holman Field.

RAMSEY COUNTY --- 4.7 SW NORTH ST PAUL [44.94, -93.06], 2.0 SE WHITE BEAR LAKE [45.06, -92.99]

11/10/12 23:17 CST	0	Thunderstorm Wind (EG 52 kt)
11/10/12 23:20 CST	0	Source: Law Enforcement

A few trees were blown down from Mounds Park, then north-northeast to around Johnson Parkway, and Minnehaha Avenue, then northeast to the White Bear Lake area.

WASHINGTON COUNTY --- 0.6 NE MAHTOMEDI [45.08, -92.96]

11/10/12 23:20 CST	0	Thunderstorm Wind (EG 52 kt)
11/10/12 23:20 CST	0	Source: NWS Storm Survey

Several trees were knocked down or broken along the eastern shore of White Bear Lake. This was most likely from a rear flank downdraft, and was associated with the storm that would soon produce the tornado in Washington County at 2321 CST.

WASHINGTON COUNTY --- 0.8 NE MAHTOMEDI [45.08, -92.96], 2.5 NNE GRANT [45.11, -92.88]

11/10/12 23:21 CST	0.20M	Tornado (EF0, L: 4.33 mi , W: 100 yd)
11/10/12 23:27 CST	0	Source: NWS Storm Survey

Hundreds of trees were toppled or snapped. Some trees fell on cars, houses and sheds. The tornado touched down in Mahtomedi, just east of the White Bear Lake shore, and it moved northeast into the northeastern part of Grant. The most significant damage was shortly after touchdown, near the intersection of Hazel and Moccasin in far northern Mahtomedi, where strong EF-0 damage was noted.

WASHINGTON COUNTY --- 3.2 NE GRANT [45.12, -92.87], 4.7 N STILLWATER [45.14, -92.81]

11/10/12 23:27 CST	5K	Thunderstorm Wind (EG 52 kt)
11/10/12 23:32 CST	0	Source: Law Enforcement

There were isolated trees, large branches and power lines down from the northeastern corner of Grant into the southern part of May Township near Big Carnelian Lake (about six miles north of Stillwater). The wind also peeled heavy gauge steel off of a barn roof and took the large doors off. The south end up of a farm shop was lifted up a few inches, pushing the west wall out and displacing the roof. Power poles were down as well.

A record breaking day occurred across the Upper Midwest as temperatures soared into the 60s and 70s across southern Minnesota during the afternoon of Saturday, November 10th. Thunderstorms developed across eastern Nebraska late in the day, and moved northeast across southern Minnesota during the evening. A powerful low level jet of 65 knots developed ahead of a strong cold front late Saturday evening. This low level jet combined with ample instability to create several lines of thunderstorms across southern Minnesota. One line of thunderstorms moved through the southern and eastern metro area of the Twin Cities, and produced four EF-0 tornadoes, along with damaging straight line winds. One tornado moved through the Burnsville area, the second moved through Eagan, the third occurred near Lilydale, and the fourth hit Mahtomedi and Grant. In addition to the tornadoes, there was a long path of damaging straight line winds that caused numerous large trees to blow down onto houses, cars and other public and private structures. These were the latest Minnesota tornadoes in a calendar year in the Storm Prediction Center database (which began in 1950), although there may have been one later tornado on Nov 16, 1931 (but records of tornadoes were not maintained before 1950).

MINNESOTA, Northeast

(MN-Z010) KOOCHICHING, (MN-Z011) NORTHERN ST. LOUIS, (MN-Z018) NORTHERN ITASCA, (MN-Z019) CENTRAL ST. LOUIS, (MN-Z025) NORTHERN CASS, (MN-Z026) SOUTHERN ITASCA, (MN-Z033) SOUTHERN CASS, (MN-Z034) CROW WING, (MN-Z035) NORTHERN AITKIN, (MN-Z036) SOUTHERN AITKIN, (MN-Z037) SOUTHERN ST. LOUIS / CARLTON, (MN-Z038) PINE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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The month began with severe drought conditions (D2) in a small portion of western Koochiching County and the southern half of Pine County. By the 27th the severe drought had expanded into most of the region, with the exception of the Arrowhead counties of Cook and Lake and areas bordering the Canadian border.

MINNESOTA, Northwest

(MN-Z004) KITTSON

11/10/12 00:00 CST	0	Winter Storm
11/11/12 06:00 CST	0	

As a surface low pressure system tracked from eastern South Dakota on the afternoon of the 10th into southwestern Ontario by the morning of the 11th, a variety of weather occurred over North Dakota and Minnesota. The warmest temperatures on the afternoon of the 10th were over west central Minnesota, with highs in the middle 40s. Meanwhile, temperatures stayed in the upper 20s over most of northeast North Dakota. Several bands of accumulating freezing rain moved across northeast North Dakota during the first half of the day of the 10th, in addition to several inches of light snow. Some accumulations of freezing rain also fell in the extreme northwest corner of Minnesota. By the afternoon into the evening of the 10th, a very thin band of heavy snow set up along a Bismarck to Knox to Rock Lake line, where 12 to 17 inches of snow fell in about a 20 mile wide band. Further east, the freezing rain slowly transitioned over to light snow as well that evening. The ice caused tree damage and power outages in some areas along with hazardous driving conditions.

MINNESOTA, Southeast

(MN-Z094) MOWER, (MN-Z095) FILLMORE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Precipitation amounts during November only averaged 0.5 to 1 inch across Fillmore and Mower Counties. With such a small amount of precipitation, Mower County remained in a severe to extreme drought while the severe drought expanded slightly across the northwest part of Fillmore County. The USDA announced that the harvest price payout for crop insurance would be \$7.50 per bushel for corn and \$15.39 per bushel for soybeans while the non-harvest price payout would be \$5.68 per bushel for corn and \$12.55 per bushel for soybeans. Higher grain and feed prices resulting from the drought, will cause Hormel Food Corp. to raise prices on some meat products in 2013.

(MN-Z079) WABASHA, (MN-Z086) DODGE, (MN-Z087) OLMSTED, (MN-Z088) WINONA

11/27/12 06:00 CST	0	Drought
11/30/12 23:59 CST	0	

With only a minimal amount of precipitation across southeast Minnesota during November, the severe drought conditions once again expanded across the area. By the end of the month, all or parts of Dodge, Olmsted, Wabasha and Winona Counties were classified as being in a severe drought. Little change in the drought conditions occurred in Fillmore and Mower Counties as they remained classified in a severe to extreme drought.

MINNESOTA, Southwest

(MN-Z071) LINCOLN, (MN-Z072) LYON, (MN-Z080) MURRAY, (MN-Z081) COTTONWOOD, (MN-Z089) NOBLES, (MN-Z090) JACKSON, (MN-Z097) PIPESTONE, (MN-Z098) ROCK

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Drought conditions continued over all of southwest Minnesota in November with below to well below normal rainfall keeping soil dry. The poor germination of winter wheat was more strongly confirmed. There were few remaining water restrictions given the much lower water usage compared with the summer and early fall, but the low soil moisture levels presented a bleak outlook for the next spring and summer without a very significant increase in precipitation over the winter. Drought was generally listed as continued severe to extreme for the area.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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MINNESOTA, West Central

(MN-Z039) TRAVERSE, (MN-Z046) BIG STONE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The severe drought continued across Big Stone county and expanded across all of Traverse county in west central Minnesota. Extreme drought conditions continued into far southeast Big Stone county.

MISSISSIPPI, Central

MADISON COUNTY --- 2.8 SSE FLORA [32.51, -90.31], 1.6 SW MADISON STATION [32.45, -90.14]

11/05/12 18:55 CST	0	Hail (0.75 in)
11/05/12 19:15 CST	0	Source: Trained Spotter

RANKIN COUNTY --- 2.1 S PELAHATCHIE [32.29, -89.80]

11/05/12 19:50 CST	0	Hail (0.75 in)
11/05/12 19:50 CST	0	Source: Broadcast Media

A potent weather disturbance interacted with a relatively unstable air mass to kick off a couple strong storms during the evening of the 5th. Small hail fell in vicinity of the Jackson metro area.

(MS-Z054) COPIAH

11/28/12 03:30 CST	0	Dense Fog
11/28/12 03:30 CST	0	

Patchy dense fog developed on the morning of the 28th across south-central Mississippi. A vehicle accident on I-55 north of Brookhaven resulted in one fatality. Dense fog in the area was cited as a contributor to the accident.

MISSISSIPPI, North

(MS-Z001) DE SOTO

11/01/12 00:00 CST	0	Drought
11/20/12 06:00 CST	0	

Beneficial rainfall during the month of November improved drought conditions across extreme Northwest Mississippi. As a result, severe (D2) drought conditions improved to moderate (D1) conditions by the middle of the month across extreme Northwest Mississippi. River and lake levels continued to improve due to the rainfall.

MISSOURI, East

(MO-Z041) BOONE, (MO-Z042) AUDRAIN, (MO-Z051) MONTGOMERY

11/01/12 00:00 CST	0	Drought
11/16/12 00:00 CST	0	

Extreme drought (D3) conditions continued across Audrain, Boone and Montgomery counties in Missouri. By mid-month, they were lowered to severe drought (D2) status.

(MO-Z035) RALLS, (MO-Z047) MONITEAU, (MO-Z048) COLE, (MO-Z049) OSAGE, (MO-Z052) LINCOLN, (MO-Z059) GASCONADE, (MO-Z060) WARREN

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Severe drought (D2) conditions continued through November for parts of Central and Eastern Missouri.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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MISSOURI, Lower

(MO-Z113) DUNKLIN, (MO-Z115) PEMISCOT

11/01/12 00:00 CST	0	Drought
11/20/12 06:00 CST	0	

Beneficial rain during the month of November improved drought conditions across the Missouri Bootheel. As a result, extreme (D3) conditions improved to moderate (D1) conditions. Pastures as well as lake and river levels improved greatly due to the rainfall.

MISSOURI, Northeast

(MO-Z009) SCOTLAND, (MO-Z010) CLARK

11/01/12 00:00 CST	0	Drought
11/12/12 11:55 CST	0	

The drought that began in June and worsened during the summer and into the fall finally began to show improving conditions in November. This was due to somewhat more rainfall as the weather pattern became a bit more active. For the first two weeks of the month all of eastern IA, northwest and western IL and extreme northeast MO was in a severe drought (D2), according to the U.S. Drought Monitor. However, during the last half of the month only portions of northeast and eastern IA and northwest IL were still in a severe drought. The remainder of the area had improved to a moderate drought (D1) classification.

(MO-Z009) SCOTLAND, (MO-Z010) CLARK

11/20/12 02:00 CST	0	Dense Fog
11/20/12 23:59 CST	0	

A weak trough of low pressure from MN into the southern Plains brought light south winds and increasing low level moisture into the region. This resulted in the development of widespread dense fog beginning during the evening of November 19, 2012 and lasting into much of November 20. Other than a brief improvement in conditions during the early to mid afternoon, visibilities were frequently at or below 1/4 mile.

(MO-Z009) SCOTLAND, (MO-Z010) CLARK

11/21/12 00:00 CST	0	Dense Fog
11/21/12 00:00 CST	0	

Widespread dense fog with visibilities frequently 1/4 mile or less occurred during the night and much of the morning on November 21, 2012. The fog was the result of weak high pressure bringing clear skies and light winds, but low level moisture was plentiful to help create the fog. As the high pushed off to the east of the area increasing south winds helped to dissipate the fog by noon. Flights were cancelled and travel by vehicle was slowed or delayed which disrupted many plans being this was the day before Thanksgiving.

MISSOURI, Northwest

(MO-Z001) ATCHISON, (MO-Z002) NODAWAY, (MO-Z003) WORTH, (MO-Z004) GENTRY, (MO-Z005) HARRISON, (MO-Z006) MERCER, (MO-Z007) PUTNAM, (MO-Z011) HOLT, (MO-Z012) ANDREW, (MO-Z013) DE KALB, (MO-Z014) DAVIESS, (MO-Z015) GRUNDY, (MO-Z016) SULLIVAN, (MO-Z020) BUCHANAN, (MO-Z021) CLINTON, (MO-Z022) CALDWELL, (MO-Z023) LIVINGSTON, (MO-Z024) LINN, (MO-Z028) PLATTE, (MO-Z029) CLAY, (MO-Z030) RAY, (MO-Z037) JACKSON, (MO-Z038) LAFAYETTE, (MO-Z043) CASS, (MO-Z044) JOHNSON, (MO-Z046) COOPER, (MO-Z053) BATES, (MO-Z054) HENRY

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The drought continued across the area during the month of November. Slight improvement was noted, with D1 to D2 conditions prevailing. Rainfall deficits were generally in the 10 to 16 inch range for the year.

MISSOURI, Southeast

(MO-Z086) BOLLINGER, (MO-Z087) CAPE GIRARDEAU, (MO-Z100) WAYNE, (MO-Z107) CARTER, (MO-Z108) RIPLEY, (MO-Z109) BUTLER, (MO-Z110)

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
STODDARD, (MO-Z111) SCOTT, (MO-Z112) MISSISSIPPI, (MO-Z114) NEW MADRID				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	
<p>There was slight improvement in long-term drought conditions during the month of November. Rainfall was below normal during the month, but this deficit was partially offset by low evaporation rates caused by unseasonably cool air. The drought officially ended along and north of a line from Marble Hill to Cape Girardeau. The area of severe drought improved to moderate drought. By the end of the month, areas south and west of a line from Cape Girardeau to Marble Hill were in moderate drought. The main impact of the long-term drought was on farm ponds used for irrigating fields or raising livestock. Soil moisture was near normal. Some pastures remained in poor or very poor condition, but many of them improved to adequate condition. Streamflows were running about normal. At Cape Girardeau, November rainfall was 1.32 inches, which was 3.12 inches below normal. The year-to-date rainfall deficit hovered around 18 inches. The drought began in May and continued into December in most areas.</p>				
(MO-Z076) PERRY, (MO-Z087) CAPE GIRARDEAU, (MO-Z111) SCOTT, (MO-Z112) MISSISSIPPI				
	11/08/12 04:00 CST		0	Dense Fog
	11/08/12 07:00 CST		0	
<p>Widespread dense fog reduced visibility to one-quarter mile or less across the Mississippi River counties of southeast Missouri. Surface high pressure was centered over the lower and mid Mississippi Valley, which resulted in clear and calm conditions conducive to dense fog.</p>				
(MO-Z076) PERRY, (MO-Z087) CAPE GIRARDEAU, (MO-Z111) SCOTT, (MO-Z112) MISSISSIPPI				
	11/21/12 05:00 CST		0	Dense Fog
	11/21/12 09:00 CST		0	
<p>Widespread dense fog reduced visibility to one-quarter mile or less across the Mississippi River counties of southeast Missouri. Surface high pressure was centered over the mid Mississippi Valley, which resulted in clear and calm conditions conducive to dense fog.</p>				
(MO-Z087) CAPE GIRARDEAU, (MO-Z109) BUTLER, (MO-Z110) STODDARD, (MO-Z111) SCOTT, (MO-Z112) MISSISSIPPI, (MO-Z114) NEW MADRID				
	11/22/12 01:00 CST		0	Dense Fog
	11/22/12 08:00 CST		0	
<p>Widespread dense fog blanketed most of southeast Missouri, mainly to the southeast of a line from Doniphan to Marble Hill and Perryville. Visibility was one-quarter mile or less. High pressure over the central Appalachian Mountains produced a light south wind flow of moist air, which contributed to the dense fog.</p>				
MISSOURI, Southwest				
(MO-Z055) BENTON, (MO-Z057) MILLER, (MO-Z058) MARIES, (MO-Z066) VERNON, (MO-Z069) CAMDEN, (MO-Z070) PULASKI, (MO-Z071) PHELPS, (MO-Z080) DALLAS, (MO-Z081) LACLEDE, (MO-Z082) TEXAS, (MO-Z083) DENT, (MO-Z097) HOWELL, (MO-Z098) SHANNON, (MO-Z101) MCDONALD, (MO-Z102) BARRY, (MO-Z106) OREGON				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	
<p>Despite appreciable rainfall earlier in the fall season, November was drier than normal which has kept drought conditions across portions of the Missouri Ozarks.</p>				
MONTANA, Central				
(MT-Z009) NORTH ROCKY MOUNTAIN FRONT, (MT-Z047) BLAINE, (MT-Z048) SOUTHERN ROCKY MOUNTAIN FRONT				
	11/05/12 04:31 MST		0	High Wind (MAX 66 kt)
	11/07/12 04:55 MST		0	
<p>Gusty west winds developed along the Rocky Mountain Front and Blaine/Fergus counties causing difficult driving conditions for high-profile vehicles.</p>				
(MT-Z008) BEAVERHEAD, (MT-Z009) NORTH ROCKY MOUNTAIN FRONT, (MT-Z010) EASTERN GLACIER, (MT-Z011) HILL, (MT-Z012) CASCADE, (MT-Z013) CHOUTEAU, (MT-Z014) SOUTHERN LEWIS AND CLARK, (MT-Z015) MADISON, (MT-Z044) TOOLE, (MT-Z045) LIBERTY, (MT-Z046)				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
EASTERN PONDERA, (MT-Z047) BLAINE, (MT-Z048) SOUTHERN ROCKY MOUNTAIN FRONT, (MT-Z049) EASTERN TETON, (MT-Z050) JUDITH BASIN, (MT-Z051) FERGUS, (MT-Z052) JEFFERSON, (MT-Z053) BROADWATER, (MT-Z054) MEAGHER, (MT-Z055) GALLATIN				
	11/08/12 02:00 MST		0	Heavy Snow
	11/10/12 11:00 MST		0	
(MT-Z012) CASCADE, (MT-Z046) EASTERN PONDERA, (MT-Z049) EASTERN TETON				
	11/09/12 05:00 MST		0	Blizzard
	11/09/12 10:30 MST		0	
A strong Pacific storm system interacted with a cold arctic airmass to bring widespread heavy snow to the forecast area between November 8 and 10, 2012. Impacts from this storm included traffic accidents, road/school closures and aviation delays. Towards the end of the storm, strong winds developed and caused blizzard conditions for areas along the Rocky Mountain Front and central Montana.				
(MT-Z009) NORTH ROCKY MOUNTAIN FRONT				
	11/11/12 23:00 MST		0	High Wind (MAX 52 kt)
	11/12/12 01:00 MST		0	
After a heavy snow event across much of the forecast area, strong and gusty winds developed along the Rocky Mountain Front causing blowing snow and difficult driving conditions.				
(MT-Z009) NORTH ROCKY MOUNTAIN FRONT, (MT-Z012) CASCADE, (MT-Z015) MADISON, (MT-Z048) SOUTHERN ROCKY MOUNTAIN FRONT				
	11/19/12 06:24 MST		0	High Wind (MAX 63 kt)
	11/20/12 01:15 MST		0	
(MT-Z009) NORTH ROCKY MOUNTAIN FRONT				
	11/19/12 11:00 MST		0	Blizzard
	11/20/12 13:00 MST		0	
While high winds and snow created blizzard conditions along the Rocky Mountain Front, strong downslope winds also occurred over parts of north-central and southwest Montana.				
(MT-Z009) NORTH ROCKY MOUNTAIN FRONT, (MT-Z048) SOUTHERN ROCKY MOUNTAIN FRONT				
	11/23/12 18:28 MST		0	High Wind (MAX 63 kt)
	11/24/12 01:00 MST		0	
High westerly winds developed along the Rocky Mountain Front and caused difficult travel conditions over Marias Pass and the Hudson Bay Divide. Areas of blowing snow also caused reduced visibilities.				
(MT-Z009) NORTH ROCKY MOUNTAIN FRONT				
	11/24/12 06:00 MST		0	Heavy Snow
	11/24/12 23:00 MST		0	
Light snow fell over parts of the plains and mountains across southwest and north-central Montana around Thanksgiving while heavy snow fell in the mountains above 5000 feet along the Northern Rocky Mountain Front. A Flash Freeze also occurred over areas along the Rocky Mountain Front, adjacent plains and central Montana including the Great Falls area on the evening of Sunday, November 25th.				
(MT-Z009) NORTH ROCKY MOUNTAIN FRONT, (MT-Z015) MADISON				
	11/27/12 21:57 MST		0	High Wind (MAX 54 kt)
	11/29/12 12:43 MST		0	
High winds and blowing snow created difficult travel conditions over the Rocky Mountain Front, particularly over Marias Pass and Hudson Bay Divide. High winds also occurred on Highway 287 over Norris Hill causing difficult travel conditions for high profile vehicles.				
(MT-Z055) GALLATIN				
	11/30/12 09:51 MST		0	Heavy Snow
	11/30/12 23:59 MST		0	
A phenomena-based heavy snow event occurred in far southwest Montana including the West Yellowstone/Big Sky areas. In addition, heavy snow fell in areas above 5000 feet along the Rocky Mountain Front.				

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
MONTANA, East				

(MT-Z016) CENTRAL AND SE PHILLIPS, (MT-Z017) CENTRAL AND SOUTHERN VALLEY, (MT-Z023) MCCONE, (MT-Z060) LITTLE ROCKY MOUNTAINS

11/05/12 07:20 MST	0	High Wind (MAX 58 kt)
11/05/12 14:45 MST	0	

Upper level winds and pressure gradients placed northeast Montana in a favorable location to develop strong winds.

(MT-Z016) CENTRAL AND SE PHILLIPS, (MT-Z017) CENTRAL AND SOUTHERN VALLEY, (MT-Z018) DANIELS, (MT-Z019) SHERIDAN, (MT-Z020) WESTERN ROOSEVELT, (MT-Z021) PETROLEUM, (MT-Z022) GARFIELD, (MT-Z023) MCCONE, (MT-Z024) RICHLAND, (MT-Z025) DAWSON, (MT-Z026) PRAIRIE, (MT-Z027) WIBAUX, (MT-Z059) NORTHERN PHILLIPS, (MT-Z060) LITTLE ROCKY MOUNTAINS, (MT-Z061) NORTHERN VALLEY, (MT-Z062) EASTERN ROOSEVELT

11/08/12 10:00 MST	2	25K	Winter Storm
11/11/12 12:34 MST	1	0	

Direct Fatalities: F19VE, F21VE

(MT-Z017) CENTRAL AND SOUTHERN VALLEY

11/09/12 08:51 MST	0	Blizzard
11/09/12 12:53 MST	0	

A low pressure system from the Gulf of Alaska descended over the Rocky Mountain region, then moved northeast, emerging over the northern high plains. An arctic air mass from Alberta combined with wamer temperatures from the south to steer plentiful moisture through the area, bringing the first major winter storm of the season to northeast Motana.

MONTANA, South

(MT-Z028) SOUTHERN WHEATLAND, (MT-Z029) MUSSELSHELL, (MT-Z032) CUSTER, (MT-Z034) NORTHERN STILLWATER, (MT-Z036) POWDER RIVER, (MT-Z038) SOUTHERN BIG HORN, (MT-Z040) NORTHERN PARK COUNTY, (MT-Z041) NORTHERN SWEET GRASS, (MT-Z056) RED LODGE FOOTHILLS, (MT-Z058) SOUTHERN ROSEBUD, (MT-Z063) JUDITH GAP, (MT-Z064) PARADISE VALLEY, (MT-Z065) LIVINGSTON AREA, (MT-Z067) ABSAROOKIE / BEARTOOTH MOUNTAINS, (MT-Z068) CRAZY MOUNTAINS

11/08/12 05:00 MST	0	Winter Storm
11/10/12 14:00 MST	0	

A cold air mass moved south out of Canada and combined with a powerful storm system that moved in from the Pacific Northwest Coast. This resulted in periods of heavy snow across portions of the Billings Forecast Area. In addition, a freezing drizzle/snow mix occurred across the eastern portions of the area resulting in numerous vehicle slide offs.

MONTANA, West

(MT-Z001) KOOTENAI/CABINET REGION, (MT-Z002) WEST GLACIER REGION, (MT-Z006) BITTERROOT / SAPPHIRE MOUNTAINS, (MT-Z007) BUTTE / BLACKFOOT REGION, (MT-Z043) POTOMAC / SEELEY LAKE REGION

11/08/12 06:30 MST	0	Heavy Snow
11/09/12 19:10 MST	0	

A multifaceted winter storm moved into western Montana, when moisture from the Pacific moved in from the west on a strong jet streak. In addition very cold air moved out of central Canada and across the Continental Divide. This combination produced areas of heavy snowfall.

NEBRASKA, Central

(NE-Z004) SHERIDAN, (NE-Z005) EASTERN CHERRY, (NE-Z006) KEYA PAHA, (NE-Z007) BOYD, (NE-Z008) BROWN, (NE-Z009) ROCK, (NE-Z010) HOLT, (NE-Z022) GARDEN, (NE-Z023) GRANT, (NE-Z024) HOOKER, (NE-Z025) THOMAS, (NE-Z026) BLAINE, (NE-Z027) LOUP, (NE-Z028) GARFIELD, (NE-Z029)

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
WHEELER, (NE-Z035) ARTHUR, (NE-Z036) MCPHERSON, (NE-Z037) LOGAN, (NE-Z038) CUSTER, (NE-Z056) DEUEL, (NE-Z057) KEITH, (NE-Z058) PERKINS, (NE-Z059) LINCOLN, (NE-Z069) CHASE, (NE-Z070) HAYES, (NE-Z071) FRONTIER, (NE-Z094) WESTERN CHERRY	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	
(NE-Z004) SHERIDAN, (NE-Z005) EASTERN CHERRY, (NE-Z006) KEYA PAHA, (NE-Z007) BOYD, (NE-Z008) BROWN, (NE-Z009) ROCK, (NE-Z010) HOLT, (NE-Z022) GARDEN, (NE-Z023) GRANT, (NE-Z024) HOOKER, (NE-Z025) THOMAS, (NE-Z026) BLAINE, (NE-Z027) LOUP, (NE-Z028) GARFIELD, (NE-Z029) WHEELER, (NE-Z035) ARTHUR, (NE-Z036) MCPHERSON, (NE-Z037) LOGAN, (NE-Z038) CUSTER, (NE-Z056) DEUEL, (NE-Z057) KEITH, (NE-Z058) PERKINS, (NE-Z059) LINCOLN, (NE-Z069) CHASE, (NE-Z070) HAYES, (NE-Z071) FRONTIER, (NE-Z094) WESTERN CHERRY	11/01/12 00:00 MST		0	Drought
	11/30/12 23:59 MST		0	

The drought persisted into November with Exceptional Drought (D4) condition. In November rainfall remained below normal and the average daily mean temperatures above normal for little change in soil conditions. The USDA reported in Nebraska 97 percent of pasture and range land with "Poor" to "Very Poor" conditions, while winter wheat in Nebraska was assessed 46 percent in the "Poor" to "Very Poor" as of November 25th. The media's focus has turned to the winter wheat with dim outlooks given to farmers facing a forecast of drought persistence on the U.S. Drought Monitor.

NEBRASKA, East

(NE-Z011) KNOX, (NE-Z012) CEDAR, (NE-Z015) THURSTON, (NE-Z016) ANTELOPE, (NE-Z017) PIERCE, (NE-Z018) WAYNE, (NE-Z030) BOONE, (NE-Z031) MADISON, (NE-Z032) STANTON, (NE-Z033) CUMING, (NE-Z034) BURT, (NE-Z042) PLATTE, (NE-Z043) COLFAX, (NE-Z044) DODGE, (NE-Z045) WASHINGTON, (NE-Z050) BUTLER, (NE-Z051) SAUNDERS, (NE-Z052) DOUGLAS, (NE-Z053) SARPY, (NE-Z065) SEWARD, (NE-Z066) LANCASTER, (NE-Z067) CASS, (NE-Z068) OTOE, (NE-Z078) SALINE, (NE-Z088) JEFFERSON, (NE-Z089) GAGE, (NE-Z090) JOHNSON, (NE-Z091) NEMAHA, (NE-Z092) PAWNEE, (NE-Z093) RICHARDSON	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

Drought conditions remained over much of eastern Nebraska into November as precipitation continued below normal, generally a half an inch or less (although a little over 1 inch fell over parts of far southeast Nebraska). These amounts were around an inch below normal. Thus, Exceptional Drought conditions continued in northeast Nebraska near and northwest of a line from Columbus to Pender with the Drought intensity remaining in the Extreme category southeast of there from around Lincoln and Beatrice through Omaha. Conditions were slightly better southeast of Lincoln and Omaha, but they were still in the Severe category. Extreme or Exceptional drought conditions persisted over much of the area into December.

PLATTE COUNTY --- 1.2 ESE MONROE [41.47, -97.60]

11/10/12 18:35 CST	0	Hail (0.75 in)
11/10/12 18:35 CST	0	Source: Public

Dime-size hail was accompanied by thunderstorm wind gusts estimated at around 60 mph.

PLATTE COUNTY --- 1.2 ESE MONROE [41.47, -97.60]

11/10/12 18:35 CST	0	Thunderstorm Wind (EG 52 kt)
11/10/12 18:35 CST	0	Source: Fire Department/Rescue

Dime size hail was also reported with this storm.

BURT COUNTY --- 0.7 N DECATUR [42.01, -96.25]

11/10/12 20:15 CST	0	Hail (0.75 in)
11/10/12 20:15 CST	0	Source: Fire Department/Rescue

Dime-size hail was accompanied by wind gusts estimated at around 60 mph.

BURT COUNTY --- 0.7 N DECATUR [42.01, -96.25]

11/10/12 20:15 CST	0	Thunderstorm Wind (EG 52 kt)
11/10/12 20:15 CST	0	Source: Fire Department/Rescue

Dime size hail also accompanied winds.

(NE-Z066) LANCASTER

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	11/10/12 20:40 CST		0	High Wind (MAX 57 kt)
	11/10/12 20:55 CST		0	
GAGE COUNTY --- 2.7 ENE CORTLAND [40.51, -96.65]				
	11/10/12 20:50 CST		0	Thunderstorm Wind (EG 52 kt)
	11/10/12 20:50 CST		0	Source: Public

Outflow gusts from thunderstorms were estimated around 60 mph.

A deep upper trough moved across the Rockies and into the central plains bringing near-record high temperatures ahead of it and a very cold airmass behind it. Snow fell across much of the High Plains and Dakotas while isolated severe storms developed along a cold front.

NEBRASKA, Extreme Northeast

(NE-Z013) DIXON, (NE-Z014) DAKOTA

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Drought conditions continued over extreme northeast Nebraska in November with below normal rainfall keeping soil dry. The poor germination of winter wheat was more strongly confirmed. There were few remaining water restrictions given the much lower water usage compared with the summer and early fall, but the low soil moisture levels presented a bleak outlook for the next spring and summer without a very significant increase in precipitation over the winter. Drought was generally listed as continued severe to extreme for the area.

NEBRASKA, Extreme Southwest

(NE-Z079) DUNDY, (NE-Z080) HITCHCOCK, (NE-Z081) RED WILLOW

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

(NE-Z079) DUNDY, (NE-Z080) HITCHCOCK, (NE-Z081) RED WILLOW

11/01/12 00:00 MST	0	Drought
11/30/12 23:59 MST	0	

Drought conditions continued from October with extreme southwest Nebraska rated as being in Exceptional (D4) Drought. Only a few hundredths of an inch of precipitation fell during the month of November. Year-to-date precipitation through the end of November averaged 40% to 60% of normal.

NEBRASKA, South Central

(NE-Z039) VALLEY, (NE-Z040) GREELEY, (NE-Z041) NANCE, (NE-Z046) SHERMAN, (NE-Z047) HOWARD, (NE-Z048) MERRICK, (NE-Z049) POLK, (NE-Z060) DAWSON, (NE-Z061) BUFFALO, (NE-Z062) HALL, (NE-Z063) HAMILTON, (NE-Z064) YORK, (NE-Z072) GOSPER, (NE-Z073) PHELPS, (NE-Z074) KEARNEY, (NE-Z075) ADAMS, (NE-Z076) CLAY, (NE-Z077) FILLMORE, (NE-Z082) FURNAS, (NE-Z083) HARLAN, (NE-Z084) FRANKLIN, (NE-Z085) WEBSTER, (NE-Z086) NUCKOLLS, (NE-Z087) THAYER

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

According to the U.S. Drought Monitor, November marked six months since severe (or worse) drought started to take its grip on South Central Nebraska. It also marked the seventh consecutive month of below normal precipitation across the majority of the 24-county area, as the summer and fall of 2012 continued notching its place in history as one of the worst droughts in many decades. Although damage to the primary 2012 crop season had already been done before the month began, November actually registered as the driest month since the drought's onset in terms of percent-of-normal precipitation. Throughout the month, all 24 counties remained under a federally-designated drought disaster, and according to weekly issuances of the U.S. Drought Monitor there was essentially no change whatsoever in drought classification. As a result, category D4 exceptional drought (the worst possible category) remained firmly in place across all or part of 15 counties, primarily those north of Interstate 80 and also west of Highway 183. Meanwhile, category D3

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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extreme drought persisted across most of the other nine counties, while only a small sliver of category D2 severe drought held on in southern Thayer County. Based on reports from around 50 NWS cooperative observers, and also incorporating radar-derived estimation, virtually the entire area measured below normal precipitation in November (per normals generally between 0.90-1.40"). More significantly, at least one-third of the area measured less than one-tenth of normal November precipitation, including several counties primarily west of Highway 281 that hardly saw a drop of rain. In fact, a few NWS cooperative observers measured zero precipitation for the month, including Kearney airport, Beaver City, Holdrege and Minden. On the comparatively more fortunate side of things, a roughly eight-county area near and east of Highway 281 received at least 0.25-1.00" during the month, nearly all of which fell during thunderstorms on the 10th. A few of the highest monthly totals within these eastern areas included 1.44" near Gresham, 1.25" near York and 1.20" near Shelby.

Over the longer range period from May through late November, most of South Central Nebraska only realized between 20-60 percent of normal precipitation. The northwest quadrant of the area was clearly the "driest of the dry" during this nearly six-month span, highlighted by Ord airport with merely 4.03", or 21% of the normal amount of 19.21". For the week ending November 18th, the Nebraska Weather and Crops Report from the USDA indicated that state-averaged topsoil moisture was at its lowest rating for that time of year since 1999, with 95% of the state classified as short to very short. Subsoil moisture was even worse at 99% short to very short. As a result, winter wheat emergence had been hindered as evidenced by thin and spotty stands. Forty percent of the wheat crop was reported to be in poor to very poor condition and only 17% in good condition, the poorest rating for the date since 1990. This was quite a contrast from one year ago in 2011, when 78% of the young crop rated good to excellent.

HOWARD COUNTY --- 1.0 SW ST LIBORY [41.07, -98.38]

11/10/12 16:40 CST	25K	Hail (1.75 in)
11/10/12 16:40 CST	0	Source: Law Enforcement

HOWARD COUNTY --- 3.0 ENE CUSHING [41.32, -98.33]

11/10/12 16:53 CST	10K	Hail (1.25 in)
11/10/12 16:53 CST	0	Source: CoCoRaHS

Extensive roof and siding damage was reported.

HAMILTON COUNTY --- 8.0 W AURORA [40.87, -98.15]

11/10/12 18:27 CST	0	Hail (0.88 in)
11/10/12 18:27 CST	0	Source: Emergency Manager

Nickel size hail was accompanied by 50 mph winds.

WEBSTER COUNTY --- 4.0 NNE RED CLOUD [40.15, -98.50]

11/10/12 19:09 CST	0	Thunderstorm Wind (MG 56 kt)
11/10/12 19:09 CST	0	Source: Mesonet

HAMILTON COUNTY --- 6.6 ENE STOCKHAM [40.75, -97.85]

11/10/12 19:10 CST	0	Hail (0.75 in)
11/10/12 19:10 CST	0	Source: Trained Spotter

This Saturday afternoon and evening featured the year's final round of strong to severe thunderstorms in South Central Nebraska, primarily impacting counties along and east of Highway 281 between 330 PM and 9 PM CST near a slow-moving cold front. These storms prompted issuance of the first November severe thunderstorm warnings within the local 24-county area since 2005. Despite the rather widespread coverage of storms, which mainly took the form of line segments and multicell clusters, most of them produced only very small hail and sub-severe wind gusts. The handful of severe-criteria reports were highlighted by half dollar to golf ball size hail in eastern Howard County and a measured 64 MPH wind gust near Red Cloud.

The initial rounds of strong to severe storms developed and intensified between 330 PM and 630 PM, concentrated along a narrow axis extending from the Franklin and Red Cloud areas, north-northeast through the Hastings, Grand Island and Fullerton areas. During these early stages of the event, one storm briefly intensified and became quasi-discrete as it tracked through eastern Howard County, producing large hail. Generally between 630 PM and 9 PM, most of the quasi-linear activity concentrated east of a Red Cloud-Aurora-Genoa line, before gradually departing the local area to the east. Rainfall totals from these storms were mainly less than one inch, with one of the higher exceptions including 1.35" near Gresham in York County. On the synoptic scale aloft, this event was driven by increased forcing along the eastern fringes of a deep, expansive trough dominating the entire western half of the nation. At the surface, a warm front initially surged northward into most of South Central Nebraska during the day, resulting in daily record high temperatures in the upper-70s at places such as Grand Island and Hastings. Surface dewpoints also climbed into the 50s along and ahead of this boundary during the afternoon before it began sliding southeast as a cold front. Late afternoon/early evening mesoscale severe weather parameters featured up to around 1000 J/kg mixed-layer CAPE and strong 0-6 kilometer deep layer wind shear of at least 50-70 knots. Low level shear was also quite strong, making the environment at least marginally supportive of tornadoes. However, this threat was likely mitigated by the predominantly linear storm mode.

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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NEVADA, South

(NV-Z014) ESMERALDA/CENTRAL NYE, (NV-Z015) LINCOLN COUNTY EXCEPT THE SHEEP RANGE, (NV-Z017) WESTERN CLARK/SOUTHERN NYE

11/08/12 13:44 PST	0	High Wind (MAX 57 kt)
11/08/12 23:45 PST	0	

A strong Pacific low pressure system and cold front brought scattered high winds to the Mojave Desert and Owens Valley.

(NV-Z014) ESMERALDA/CENTRAL NYE, (NV-Z019) SPRING MOUNTAINS

11/30/12 13:50 PST	0	High Wind (MAX 63 kt)
11/30/12 15:15 PST	0	

A Pacific storm system brought locally high winds to the Mojave Desert.

NEVADA, West

(NV-Z003) GREATER RENO/CARSON CITY/MINDEN AREA

11/09/12 11:00 PST	0	Lake-Effect Snow
11/10/12 11:00 PST	0	

A cold trough dropped along the Pacific Northwest coast on the 8th and into northern California and the interior Northwest on the 9th. The trough brought a narrow band of heavy lake effect snow to portions of western Nevada to the east of Lake Tahoe on the 9th and 10th.

(NV-Z003) GREATER RENO/CARSON CITY/MINDEN AREA

11/29/12 14:00 PST	0	High Wind (MAX 78 kt)
11/30/12 04:00 PST	0	

(NV-Z002) GREATER LAKE TAHOE AREA

11/29/12 22:00 PST	0	Winter Weather
11/30/12 16:00 PST	0	

(NV-Z001) MINERAL/SOUTHERN LYON

11/30/12 05:00 PST	0.50K	Strong Wind (MAX 39 kt)
11/30/12 06:30 PST	0	

Low pressure remained over the northeast Pacific from November 29th through December 2nd, bringing high elevation snowfall, heavy lower elevation rainfall, and strong winds to western Nevada.

NEW JERSEY, Northeast

(NJ-Z006) HUDSON, (NJ-Z104) EASTERN BERGEN, (NJ-Z105) WESTERN ESSEX, (NJ-Z106) EASTERN ESSEX, (NJ-Z107) WESTERN UNION

11/07/12 15:00 EST	0	Winter Weather
11/08/12 02:00 EST	0	

Low pressure developed across the Southeast U.S. on November 6 and intensified as it moved northeast, passing south and east of Long Island by November 8.

This nor'easter came on the heels of Superstorm Sandy. It produced heavy wet snow, strong winds, and minor coastal flooding.

Snowfall amounts ranged from 3 to 6 inches, with isolated amounts of over 7 inches. Most areas had an average snowfall of less than 6 inches.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
NEW JERSEY, South and Northwest				
(NJ-Z001) SUSSEX, (NJ-Z007) WARREN, (NJ-Z008) MORRIS, (NJ-Z010) SOMERSET, (NJ-Z015) MERCER, (NJ-Z016) SALEM, (NJ-Z017) GLOUCESTER, (NJ-Z018) CAMDEN, (NJ-Z019) NORTHWESTERN BURLINGTON, (NJ-Z021) CUMBERLAND, (NJ-Z022) WESTERN ATLANTIC, (NJ-Z023) WESTERN CAPE MAY, (NJ-Z027) SOUTHEASTERN BURLINGTON				
	11/07/12 08:00 EST		0	Winter Weather
	11/08/12 02:00 EST		0	
(NJ-Z001) SUSSEX, (NJ-Z013) WESTERN MONMOUTH, (NJ-Z020) WESTERN OCEAN, (NJ-Z022) WESTERN ATLANTIC, (NJ-Z023) WESTERN CAPE MAY, (NJ-Z027) SOUTHEASTERN BURLINGTON				
	11/07/12 11:00 EST		20K	Strong Wind (MAX 40 kt)
	11/08/12 00:00 EST		0	
(NJ-Z012) MIDDLESEX, (NJ-Z013) WESTERN MONMOUTH, (NJ-Z014) EASTERN MONMOUTH, (NJ-Z020) WESTERN OCEAN, (NJ-Z026) EASTERN OCEAN				
	11/07/12 13:00 EST		0	Winter Storm
	11/08/12 03:00 EST		0	
(NJ-Z014) EASTERN MONMOUTH, (NJ-Z024) EASTERN CAPE MAY, (NJ-Z025) EASTERN ATLANTIC, (NJ-Z026) EASTERN OCEAN				
	11/07/12 14:00 EST		80K	High Wind (MAX 55 kt)
	11/07/12 18:00 EST		0	

A strong nor'easter caused high winds along the coast, heavy snow in east central New Jersey, ten foot waves along the ocean front and minor tidal flooding along the ocean front with the overnight high tide on the 7th. It caused set backs with restoration efforts near and along coastal areas caused by post tropical storm Sandy, particularly in Monmouth and Ocean Counties. It also forced some coastal area evacuations again. Elsewhere across the state, winds were lighter, but accumulating snows occurred in most areas. Snowfall averaged 1 to 5 inches in most of the state, but reached 6 to 12 inches in Middlesex, Monmouth and Ocean Counties. The least snow fell in Hunterdon and coastal Cape May Counties. The former was too far west while the latter had mostly rain. Unfortunately the heaviest snow fell in the counties that were affected the hardest by Sandy and upwards of an additional 150,000 mainly Jersey Central Power and Light customers lost power. The combination of heavy snow and wind brought down additional trees, poles and wires.

Bands of precipitation pushed westward into the state from the offshore nor'easter on the 7th. In many places during the daytime hours, the precipitation started as rain or changed over to rain when the precipitation intensity was lighter, but fell as snow at other times. The precipitation was concentrated in the southern half of the state. From the late afternoon into the overnight hours, the heavier precipitation bands shifted north into the central and northern part of the state. This combined with falling temperatures to around the freezing mark to have snow accumulate more efficiently. Several bands of heavier snow passed through Monmouth and Ocean Counties overnight and gave them the heaviest snow in the state. All of the snow exited the state by 3 a.m. EST on the 8th. Strong to high north to northwest winds buffeted the coastal areas of the state mainly during the second half of the day on the 7th. The winds peaked during the late afternoon. In Sussex County, the strongest winds occurred late in the evening on the 7th.

Toms River, Point Pleasant, Berkeley and Brick Townships in Ocean County and Middletown Township in Monmouth County issued mandatory evacuations. In Toms River, it was along the ocean front, but also suggested voluntary evacuations for communities along the Toms River and Barnegat Bay. In Brick Township, 10,000 residents were ordered to evacuate. In Middletown Township, the evacuation order covered the area between Keansburg and Atlantic Highlands and from New Jersey State Route 36 to Raritan Bay. The combination of the heavy snow and wind caused renewed power outages to east central New Jersey and approximately 100 major road closures occurred because of downed poles, trees and wires. In Ocean County, sections of Interstate 195 as well as New Jersey State Routes 35, 37, 70 and 72 were closed. In Monmouth County, sections of Interstate 195 were closed as were New Jersey State Routes 18, 33, 34, 36 and 79. In Middlesex County, parts of U.S. Route 1 and New Jersey State Route 18 were closed and in Mercer County, U.S. Route 206 was closed. Snow related traffic accidents were reported in Vernon and Hopatcong in Sussex County.

Representative snowfall included 13.0 inches in Freehold (Monmouth County), 12.0 inches in Allaire (Monmouth County), Jackson (Ocean County), Manchester Township (Ocean County), 11.0 inches in Howell Township (Monmouth County), 8.5 inches in Beachwood (Ocean County), 7.8 inches in Cheesequake (Middlesex County), 7.2 inches in Hightstown (Mercer County), 6.2 inches in Bayville (Ocean County), 6.0 inches in Oakhurst (Monmouth County), Washington Township (Morris County) and Bernards Township (Somerset County), 5.5 inches in Carteret and Woodbridge (Middlesex County), 5.3 inches in Hillsborough (Somerset County), 5.2 inches in Point Pleasant (Ocean County), 5.0 inches in Hopewell (Mercer County), 4.5 inches in Butler (Morris County), Crosswicks (Burlington County) and Montgomery (Somerset County), 4.0 inches in Estell Manor (Atlantic County), 3.5 inches in Voorhees (Camden County), Tabernacle (Burlington County) and Ewing (Mercer County), 3.0 inches in Boonton and Randolph (Morris County), Vernon and Highland Lakes (Sussex County), Hackettstown (Warren County), Tabernacle (Burlington County), Somerville (Somerset County), Robbinsville (Mercer County), Buena Vista (Atlantic County) and Malaga (Gloucester County), 2.6 inches in Mount Laurel (Burlington County), 2.5 inches at the Atlantic City International Airport and Berlin (Camden County), 2.4 inches in Woodbine (Cape May County), 2.3 inches in Mount Laurel

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(Burlington County), 2.1 inches in Wantage (Sussex County), 2.0 Parsipanny (Morris County) and 1.7 inches in Pittsgrove Township (Salem County).

Minor tidal flooding and the highest tides occurred with the early morning high tide cycle on the 8th. Tidal flooding up the Toms River flooded New Jersey State Route 166 in the Beachwood section of Berkeley Township (Ocean County). The Black Horse Pike (U.S. Routes 40 and 322) in Pleasantville (Atlantic County) was closed in both directions because of tidal flooding near South Franklin Boulevard. Highest tides included 7.12 feet above mean lower low water in Cape May (Cape May County), 6.59 feet above mean lower low water in Atlantic City (Atlantic County), 7.26 feet above mean lower low water in Keansburg (Monmouth County) and 7.21 feet above mean lower low water in South Amboy (Middlesex County).

Peak wind gusts included 63 mph in Point Pleasant (Ocean County), 58 mph in Cape May (Cape May County), 50 mph at High Point (Sussex County), 48 mph at Barnegat Inlet (Ocean County) and 46 mph in Wantage (Sussex County).

The nor'easter was still a relatively weak low pressure system over the northeastern Gulf of Mexico on the morning of November 6th. At 7 p.m. EST on the 6th, it was located east of North Carolina and was starting to intensify. It moved to the northnortheast and at 7 a.m. EST on the 7th, the surface pressure lowered to 994 millibars and it was about 150 miles east of the Delmarva Peninsula. From there it moved very slowly to the northnortheast and intensified. At 7 p.m. EST on the 7th, its surface pressure was down to 984 millibars. Overnight, the surface pressure remained about the same and at 7 a.m. EST on the 8th, the 986 millibar nor'easter was just south of Cape Cod. The rather offshore track kept most of the highest impacts from the nor'easter right along the immediate coast.

(NJ-Z001) SUSSEX, (NJ-Z007) WARREN, (NJ-Z008) MORRIS, (NJ-Z009) HUNTERDON, (NJ-Z010) SOMERSET, (NJ-Z015) MERCER		
11/27/12 05:00 EST	0	Winter Weather
11/27/12 17:00 EST	0	

A moderate snow event affected west central and northwest New Jersey during the day on the 27th. Snowfall averaged 2 to 5 inches with the highest amounts in the higher terrain of Morris and Hunterdon Counties. There were approximately forty snowfall related traffic accidents. In the rest of the state, precipitation fell as mainly rain. Precipitation started as rain in the central part of the state and snow in the far northwest part of the state between 5 a.m. EST and 8 a.m. EST on the 27th. As the precipitation intensity increased, the rain changed over to snow by the middle of the morning and fell at its heaviest during the mid day hours. As the intensity decreased during the afternoon, some of the snow changed back to rain in the west central part of the state. The precipitation ended by 5 p.m. EST in most of the region. Temperatures were close to the freezing mark, so the snow accumulated more efficiently on grassier surfaces, bridges and less traveled roadways.

Representative snowfall included 5.0 inches in Chester and Lake Hopatcong (Morris County), 4.6 inches in Ringoes (Hunterdon County), 4.4 inches in Jefferson (Morris County), 4.3 inches in Randolph (Morris County), 4.0 inches in Butler (Morris County), Blairstown (Warren County), Wantage (Sussex County) and Neshanic (Somerset County), 3.8 inches in Stockton (Hunterdon County) 3.5 inches in Rockaway (Morris County), Allamuchy (Warren County), Lafayette (Sussex County) and Green Brook (Somerset County), 3.0 inches in Pennington (Mercer County) and Belle Mead (Somerset County), 2.8 inches in Whitehouse (Hunterdon County), 2.7 inches in Whippany (Morris County), 2.6 inches in Stewartville (Warren County), 2.1 inches in Washington (Warren County) and Flemington (Hunterdon County) and 2.0 inches in Bernards Township (Somerset County).

The snow was caused by a low pressure system that moved from the Red River Valley on the morning of the 26th eastnortheast and crossed the southern Appalachians on the morning of the 27th, the southern Delmarva Peninsula during the early afternoon on the 27th and was about 150 miles east of the Southern New Jersey Coast at 7 p.m. EST on the 27th.

NEW MEXICO, Central and North

(NM-Z501) NORTHWEST PLATEAU, (NM-Z502) CHUSKA MOUNTAINS, (NM-Z505) WEST CENTRAL PLATEAU, (NM-Z518) SANTA FE METRO AREA, (NM-Z519) ALBUQUERQUE METRO AREA, (NM-Z520) LOWER RIO GRANDE VALLEY, (NM-Z521) SANDIA/MANZANO MOUNTAINS, (NM-Z522) ESTANCIA VALLEY, (NM-Z523) CENTRAL HIGHLANDS, (NM-Z524) SOUTH CENTRAL HIGHLANDS, (NM-Z525) UPPER TULAROSA VALLEY, (NM-Z526) SOUTH CENTRAL MOUNTAINS, (NM-Z527) RATON RIDGE/JOHNSON MESA, (NM-Z528) FAR NORTHEAST HIGHLANDS, (NM-Z529) NORTHEAST HIGHLANDS, (NM-Z530) UNION COUNTY, (NM-Z531) HARDING COUNTY, (NM-Z532) EASTERN SAN MIGUEL COUNTY, (NM-Z533) GUADALUPE COUNTY, (NM-Z534) QUAY COUNTY, (NM-Z535) CURRY COUNTY, (NM-Z536) ROOSEVELT COUNTY, (NM-Z537) DE BACA COUNTY, (NM-Z538) CHAVES COUNTY PLAINS, (NM-Z539) EASTERN LINCOLN COUNTY, (NM-Z540) SOUTHWEST CHAVES COUNTY		
11/01/12 00:00 MST	0	Drought
11/30/12 23:59 MST	0	

Drought conditions persisted across the state during the month of November.

Many locations of eastern and central New Mexico recorded zero precipitation during November, continuing the trend of a lack of precipitation for several months. Across the west, precipitation generally ranged from 15-45% of normal with only a few locales receiving enough precipitation to put them over 50% of normal. Even the northern part of the state, including the mountains, fared

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poorly this month. Percent of normal values for much of northern New Mexico ranged from 5-40%, including a few locations that also reported zero precipitation for the month.

Severe drought (D2) continued across much of the northern two-thirds of New Mexico. D2 conditions were present in the northwest corner of the state including the Northwest Plateau and the Chuska Mountains as well as central areas including both the Santa Fe and Albuquerque metro areas and across the eastern plains east of the central mountain chain. Extreme (D3) drought conditions expanded across portions of the eastern plains. Union County along with Mora, Harding, Quay, Curry, Roosevelt, most of Colfax and San Miguel counties along with parts of Guadalupe, De Baca and Chaves counties were affected by D3 in the east, with D3 conditions noted in the far northwest corner on the Northwest Plateau. Exceptional (D4) drought conditions were observed across parts of Curry and Roosevelt counties along the Texas border and Union County. Monetary damages will be estimated at the end of the event.

(NM-Z503) FAR NORTHWEST HIGHLANDS, (NM-Z504) NORTHWEST HIGHLANDS, (NM-Z506) WEST CENTRAL MOUNTAINS, (NM-Z507) WEST CENTRAL HIGHLANDS, (NM-Z508) SOUTHWEST MOUNTAINS, (NM-Z510) SAN JUAN MOUNTAINS, (NM-Z511) JEMEZ MOUNTAINS, (NM-Z512) WEST SLOPES OF THE SANGRE DE CRISTO MOUNTAINS, (NM-Z513) NORTHERN SANGRE DE CRISTO MOUNTAINS ABOVE 9500 FEET/RED RIVER, (NM-Z514) SOUTHERN SANGRE DE CRISTO MOUNTAINS ABOVE 9500 FEET, (NM-Z515) EAST SLOPES OF THE SANGRE DE CRISTO MOUNTAINS, (NM-Z516) UPPER RIO GRANDE VALLEY, (NM-Z517) LOWER CHAMA RIVER VALLEY	11/01/12 00:00 MST	0	Drought
	11/30/12 23:59 MST	0	

Drought conditions expanded to all of the northern two-thirds of New Mexico by the end of November. Severe drought developed across areas of west-central and southwest New Mexico that were previously declared as moderate drought status.

(NM-Z503) FAR NORTHWEST HIGHLANDS, (NM-Z506) WEST CENTRAL MOUNTAINS, (NM-Z510) SAN JUAN MOUNTAINS, (NM-Z513) NORTHERN SANGRE DE CRISTO MOUNTAINS ABOVE 9500 FEET/RED RIVER, (NM-Z514) SOUTHERN SANGRE DE CRISTO MOUNTAINS ABOVE 9500 FEET	11/10/12 00:00 MST	0	Heavy Snow
	11/11/12 06:00 MST	0	

(NM-Z519) ALBUQUERQUE METRO AREA, (NM-Z523) CENTRAL HIGHLANDS, (NM-Z524) SOUTH CENTRAL HIGHLANDS, (NM-Z526) SOUTH CENTRAL MOUNTAINS, (NM-Z527) RATON RIDGE/JOHNSON MESA, (NM-Z528) FAR NORTHEAST HIGHLANDS, (NM-Z529) NORTHEAST HIGHLANDS, (NM-Z530) UNION COUNTY, (NM-Z531) HARDING COUNTY, (NM-Z532) EASTERN SAN MIGUEL COUNTY, (NM-Z533) GUADALUPE COUNTY, (NM-Z534) QUAY COUNTY, (NM-Z535) CURRY COUNTY, (NM-Z536) ROOSEVELT COUNTY, (NM-Z537) DE BACA COUNTY, (NM-Z538) CHAVES COUNTY PLAINS, (NM-Z539) EASTERN LINCOLN COUNTY, (NM-Z540) SOUTHWEST CHAVES COUNTY	11/10/12 08:30 MST	0	High Wind (MAX 65 kt)
	11/10/12 17:30 MST	0	

An unseasonably cold upper-level low pressure system over the Pacific Northwest on the 7th pushed slowly southeast across the Great Basin and into New Mexico through the 10th. Powerful upper-level winds in association with this system produced a widespread area of very strong surface winds along and east of the central mountain chain of New Mexico. This storm system was fairly moisture starved. However, light to moderate snowfall accumulations did occur over portions of west central and northern New Mexico. Very cold temperatures moved into the region behind this system, breaking numerous record lows on the 12th.

NEW MEXICO, South Central and Southwest

(NM-Z402) SOUTHERN GILA HIGHLANDS/BLACK RANGE, (NM-Z403) SOUTHERN GILA FOOTHILLS/MIMBRES VALLEY, (NM-Z407) SOUTHWEST DESERT/MIMBRES BASIN, (NM-Z408) EASTERN BLACK RANGE FOOTHILLS, (NM-Z409) SIERRA COUNTY LAKES, (NM-Z410) NORTHERN DONA ANA COUNTY, (NM-Z411) SOUTHERN DONA ANA COUNTY/MESILLA VALLEY, (NM-Z412) CENTRAL TULAROSA BASIN, (NM-Z413) SOUTHERN TULAROSA BASIN, (NM-Z414) WEST SLOPES SACRAMENTO MOUNTAINS BELOW 7500 FEET, (NM-Z415) SACRAMENTO MOUNTAINS ABOVE 7500 FEET, (NM-Z416) EAST SLOPES SACRAMENTO MOUNTAINS BELOW 7500 FEET, (NM-Z417) OTERO MESA	11/01/12 00:00 MST	0	Drought
	11/30/12 23:59 MST	0	

Much of Southwest New Mexico remained or was put into Severe(D2) drought during the month of November with all areas reporting below normal rainfall for the month.

(NM-Z401) UPPER GILA RIVER VALLEY, (NM-Z404) SOUTHWEST DESERT/LOWER GILA RIVER VALLEY	11/06/12 13:00 MST	0	Drought
	11/30/12 23:59 MST	0	

Much of Southwest New Mexico remained or was put into Severe(D2) drought during the month of November with all areas reporting below normal rainfall for the month.

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(NM-Z411) SOUTHERN DONA ANA COUNTY/MESILLA VALLEY, (NM-Z413) SOUTHERN TULAROSA BASIN, (NM-Z415) SACRAMENTO MOUNTAINS ABOVE 7500 FEET				
	11/10/12 06:48 MST		0	High Wind (MAX 66 kt)
	11/10/12 13:00 MST		0	

Strong southwest winds increased ahead of an upper trough moving through the Great Basin and into the Desert Southwest. A peak wind gust of 76 mph was reported 5 miles northeast of San Augustin Pass.

(NM-Z405) LOWLANDS OF THE BOOTHEEL, (NM-Z406) UPLANDS OF THE BOOTHEEL				
	11/20/12 13:00 MST		0	Drought
	11/30/12 23:59 MST		0	

Much of Southwest New Mexico remained or was put into Severe(D2) drought during the month of November with all areas reporting below normal rainfall for the month.

NEW YORK, Central

(NY-Z009) NORTHERN ONEIDA				
	11/25/12 10:00 EST		0	Lake-Effect Snow
	11/26/12 06:30 EST		0	

A main heavier band of lake effect snow developed across Northern Oneida County during the late morning of November 25. The band shifted back-and-forth through that afternoon into the night, before ending by 6:30 a.m. on November 26. Snow totals widely ranged from 4 to 11 inches.

(NY-Z009) NORTHERN ONEIDA				
	11/28/12 18:00 EST		0	Lake-Effect Snow
	11/29/12 05:00 EST		0	

A westerly flow of cold air across the relatively warm waters of Lake Ontario produced a band of heavy lake effect snow for portions of northern Oneida county from the late evening on the 28th until the morning of the 29th. Total accumulations were around 7 inches.

NEW YORK, Coastal

(NY-Z068) PUTNAM, (NY-Z070) NORTHERN WESTCHESTER, (NY-Z071) SOUTHERN WESTCHESTER, (NY-Z176) NORTHERN QUEENS				
	11/07/12 10:00 EST		0	Heavy Snow
	11/08/12 02:30 EST		0	

Low pressure developed across the Southeast U.S. on November 6 and intensified as it moved northeast, passing south and east of Long Island by November 8.

This nor'easter came on the heels of Superstorm Sandy. It produced heavy wet snow, strong winds, and minor coastal flooding.

Snowfall ranged from less than 2 inches across Long Island, to nearly 10 inches across parts of the Lower Hudson Valley.

(NY-Z078) NORTHWEST SUFFOLK, (NY-Z079) NORTHEAST SUFFOLK, (NY-Z176) NORTHERN QUEENS				
	11/07/12 13:00 EST		0.50M	High Wind (MAX 50 kt)
	11/08/12 01:00 EST		0	

A nor'easter produced high winds across portions of the area, mainly impacting Long Island.

(NY-Z079) NORTHEAST SUFFOLK, (NY-Z080) SOUTHWEST SUFFOLK, (NY-Z081) SOUTHEAST SUFFOLK, (NY-Z179) SOUTHERN NASSAU				
	11/07/12 17:30 EST		0	Coastal Flood
	11/08/12 05:30 EST		0	

Low pressure developed across the Southeast U.S. on November 6 and intensified as it moved northeast, passing south and east of Long Island by November 8.

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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This nor'easter came on the heels of Superstorm Sandy. Strong north to northeast winds resulted in widespread minor and some moderate coastal flooding during the times of high tides.

NEW YORK, East

(NY-Z065) WESTERN DUTCHESS, (NY-Z066) EASTERN DUTCHESS

11/07/12 12:00 EST	0	Winter Weather
11/08/12 09:00 EST	0	

An early season nor'easter storm impacted the region about a week after Hurricane Sandy. Upper level energy from both the northern and southern portions of the jetstream merged over the mid-Atlantic region during the morning of November 7th. This helped develop a strong area of low pressure at the surface. This storm slowly moved towards the Jersey Shore on the evening of November 7th to just off Long Island by the morning of the November 8th. The storm moved towards Cape Cod by late in the day on November 8th. The precipitation fell nearly entirely in the form of snow across the mid-Hudson Valley region. The result was a widespread 3 to 6 inches of snow across Dutchess County. In addition, strong and gusty winds to 35 mph caused for some blowing of the snow, making travel difficult.

NEW YORK, West

(NY-Z006) OSWEGO, (NY-Z008) LEWIS

11/25/12 14:00 EST	27K	Lake-Effect Snow
11/26/12 06:00 EST	0	

Lake effect snows developed off Lake Ontario as a large upper trough crossed the Great Lakes Region. Lake snows began to develop over Wayne and Oswego counties on Sunday the 25th in a northwest flow. A westward shift in the winds lifted the snow band north across the Tug Hill region during the late afternoon and evening hours. The longer fetch fed the snow band with snowfall rates of one to two inches per hour. Snowfall totals exceeded one foot over the higher elevations of the Tug Hill plateau. Route 81 through Oswego County was closed temporarily Sunday disrupting Thanksgiving holiday traffic heading home. Specific snowfall reports received included: Redfield 15 inches, West Leyden 13 inches, Lacona 12 inches, Sandy Creek and Pulaski 10 inches, and Constableville 8 inches.

NORTH CAROLINA, Central Coastal

(NC-Z095) CARTERET

11/19/12 21:00 EST	0	High Surf
11/19/12 21:00 EST	0	

On November 19th Eastern North Carolina was located between strong high pressure building in from the north and a stalled coastal low pressure off the Southeastern U.S. coast. These features placed the region in a persistent northeast flow with elevated seas and rough surf conditions. One fisherman was swept off the beach near the south end of Portsmouth Island during the afternoon hours and was not found until December 2nd.

NORTH CAROLINA, South Coastal

(NC-Z108) COASTAL NEW HANOVER, (NC-Z110) COASTAL BRUNSWICK

11/15/12 08:00 EST	0	Coastal Flood
11/15/12 11:30 EST	0	

An unusually high astronomical tide caused coastal flooding along the coast of North and South Carolina.

NORTH CAROLINA, Southwest

(NC-Z048) MADISON, (NC-Z051) SWAIN, (NC-Z052) HAYWOOD, (NC-Z053) BUNCOMBE, (NC-Z058) GRAHAM, (NC-Z059) NORTHERN JACKSON,

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(NC-Z062) MACON, (NC-Z063) SOUTHERN JACKSON, (NC-Z064) TRANSYLVANIA				
	11/05/12 22:00 EST		0	Winter Weather
	11/06/12 10:00 EST		0	

Light snow developed in the southern and central mountains, mainly above 3000 feet. The snow continued off and on overnight, with total accumulations ranging from trace amounts to as much as 2 inches in the higher elevations of the Balsams and Newfound Mountains.

NORTH DAKOTA, Central and West

(ND-Z001) DIVIDE, (ND-Z002) BURKE, (ND-Z003) RENVILLE, (ND-Z004) BOTTINEAU, (ND-Z005) ROLETTE, (ND-Z009) WILLIAMS, (ND-Z010) MOUNTRAIL, (ND-Z011) WARD, (ND-Z012) MCHENRY, (ND-Z013) PIERCE, (ND-Z017) MCKENZIE, (ND-Z018) DUNN, (ND-Z019) MERCER, (ND-Z020) OLIVER, (ND-Z021) MCLEAN, (ND-Z022) SHERIDAN, (ND-Z023) WELLS, (ND-Z025) FOSTER, (ND-Z031) GOLDEN VALLEY, (ND-Z032) BILLINGS, (ND-Z034) MORTON, (ND-Z035) BURLEIGH				
	11/09/12 19:00 CST		0	Heavy Snow
	11/11/12 01:00 CST		0	

A complex winter weather event materialized across the Northern Plains November 8th through early November 11th. Three waves of winter weather impacted west and central North Dakota, the third wave being the most severe.

The first round of winter weather came in the form of snow, impacting northwestern North Dakota during the evening of the 8th through the morning of the 9th, as a lead short wave impulse tracked east across south central Canada. Snowfall reports with this first wave were well below six inches.

As the main upper level low approached North Dakota early on the 9th, the second wave of winter weather moved into the south. Mid level dry air advection combined with a moist upslope low level flow to result in a large area of freezing drizzle developing across southwest and south central North Dakota, which continued for several hours into the afternoon of the 9th. This resulted in an extensive area of icy travel conditions prompting the North Dakota Department of Transportation to issue numerous travel advisories.

The third and most severe wave of winter weather arrived later on the 9th and continued through the 10th. Two heavy snow bands developed, the first extending across west central into northwest North Dakota from the evening of the 9th through the morning hours of the 10th. A three day storm total of eighteen inches was reported in Divide County. The second heavy snow band developed in the afternoon of the 10th and continued into the evening, extending from south central North Dakota to the Turtle Mountains. The storm total snowfall for this second heavy snow band ranged from six to ten inches central, and up to seventeen inches in Rolette County.

NORTH DAKOTA, East

(ND-Z006) TOWNER, (ND-Z007) CAVALIER, (ND-Z008) PEMBINA, (ND-Z014) BENSON, (ND-Z015) RAMSEY, (ND-Z016) EASTERN WALSH, (ND-Z024) EDDY, (ND-Z026) NELSON, (ND-Z054) WESTERN WALSH				
	11/10/12 00:00 CST		0	Winter Storm
	11/11/12 06:00 CST		0	

As a surface low pressure system tracked from eastern South Dakota on the afternoon of the 10th into southwestern Ontario by the morning of the 11th, a variety of weather occurred over North Dakota and Minnesota. The warmest temperatures on the afternoon of the 10th were over west central Minnesota, with highs in the middle 40s. Meanwhile, temperatures stayed in the upper 20s over most of northeast North Dakota. Several bands of accumulating freezing rain moved across northeast North Dakota during the first half of the day of the 10th, in addition to several inches of light snow. Some accumulations of freezing rain also fell in the extreme northwest corner of Minnesota. By the afternoon into the evening of the 10th, a very thin band of heavy snow set up along a Bismarck to Knox to Rock Lake line, where 12 to 17 inches of snow fell in about a 20 mile wide band. Further east, the freezing rain slowly transitioned over to light snow as well that evening. The ice caused tree damage and power outages in some areas along with hazardous driving conditions.

OKLAHOMA, Eastern

(OK-Z049) PUSHMATAHA, (OK-Z053) CHOCTAW, (OK-Z054) OSAGE, (OK-Z055) WASHINGTON, (OK-Z056) NOWATA, (OK-Z057) CRAIG, (OK-Z058) OTTAWA, (OK-Z059) PAWNEE, (OK-Z060) TULSA, (OK-Z061) ROGERS, (OK-Z062) MAYES, (OK-Z063) DELAWARE, (OK-Z064) CREEK, (OK-Z065) OKFUSKEE, (OK-Z066) OKMULGEE, (OK-Z067) WAGONER, (OK-Z068) CHEROKEE, (OK-Z069) ADAIR, (OK-Z070) MUSKOGEE, (OK-Z071) MCINTOSH, (OK-Z072) SEQUOYAH, (OK-Z073) PITTSBURG, (OK-Z074) HASKELL, (OK-Z075) LATIMER, (OK-Z076) LE FLORE

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

November 2012 was extremely dry across all of eastern Oklahoma. In fact, the entire region received less than 50 percent of its normal average precipitation for the month with much of the region south of I-44 receiving less than 25 percent of normal precipitation. Portions of far southeastern Oklahoma only received about 5 percent of normal precipitation for the month. For the southeastern climate region of the state, November 2012 was the second driest on record and rainfall received during the Autumn months also went down as the second driest Autumn period on record. As a result of this continued dry weather, most of eastern Oklahoma remained in extreme (D3) drought conditions while exceptional (D4) drought conditions persisted across much of Pawnee, Osage, Washington, and Creek Counties. Monetary damage estimates resulting from the drought were not available.

CHEROKEE COUNTY --- 3.5 SW MELVIN [35.88, -95.22]

11/11/12 08:30 CST	30K	Thunderstorm Wind (EG 56 kt)
11/11/12 08:30 CST	0	Source: Broadcast Media

Strong thunderstorm wind damaged boat docks on the south end of Fort Gibson Lake, just east of the dam.

A line of strong thunderstorms moved across eastern Oklahoma during the morning hours of the 11th. One of the storms embedded in the line produced wind damage on the south end of Fort Gibson Lake.

OKLAHOMA, Extreme Southeast

(OK-Z077) MCCURTAIN

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Drought conditions continued across McCurtain County in Southeast Oklahoma during the month of November. Much of the month was on the dry side with rainfall across the county ranging from near one quarter of an inch to near two inches in some locations. This was obviously not enough rainfall for McCurtain County's drought conditions to improve any. All of McCurtain County remained under D3 Extreme Drought conditions during the month of November.

OKLAHOMA, Panhandle

(OK-Z001) CIMARRON, (OK-Z002) TEXAS, (OK-Z003) BEAVER

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	80M	

A dry November caused the ongoing drought conditions to worsen across the Oklahoma Panhandle. Exceptional (D4) drought affects all of Beaver County and most of Texas County. Extreme (D3) drought affects the northwest corner of Texas County and the southern half of Cimarron County. Severe (D2) drought affects the northern half of Cimarron County.

There were very few opportunities for the Oklahoma Panhandle to see any relief in the form of precipitation and even fewer locations saw any precipitation during the month of November. The Guymon (Texas County) ASOS recorded a trace of precipitation (0.53 inches below normal). This lack of rain for the month ranked as the 26th driest November for the Oklahoma Panhandle on record. Also this November was the 10th warmest November for the Oklahoma Panhandle on record.

The dry conditions and more frequent freezes throughout the month of November have helped to further cure fuels across the Panhandle. This has kept the Keetch-Byram Drought Index steady state for the Oklahoma Panhandle with a rating within the 600 to 800 range.

The lack of rain during both October and November has limited the growth of dryland winter wheat. In some counties where dryland crops are planted, crops have already failed or even failed to emerge. Irrigated fields showed average growth but have required significant supplemental watering. The Palmer Drought Severity Index showed the Oklahoma Panhandle has degraded to the Extreme Drought rating.

Reservoirs and streamflows across the Panhandle have remained well below normal levels. Water watches for several public water systems persisted through November while voluntary to mandatory water restrictions have been enacted.

Economic losses due to the drought through November were estimated between \$20 and \$30 million a county, and were predominately the result of poor growth of winter wheat, heavy supplemental watering, and supplemental feed for cattle in pastures and rangeland.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(OK-Z001) CIMARRON, (OK-Z002) TEXAS, (OK-Z003) BEAVER				
	11/10/12 10:50 CST		2K	High Wind (MAX 58 kt)
	11/10/12 18:31 CST		0	

A potent weather system moved across the Great Plains region during the day of the 10th. This system brought a lee side low into southeastern Colorado with a cold front stretching back to the southwest across New Mexico by mid-morning. At the same time a 46 mph (40kt) low level jet and a 63 mph (55 kt) 500mb jet were setting up across the Oklahoma Panhandle.

As the morning progressed boundary layer mixing and the approaching low pressure center allowed a steady increase of surface wind gusts. By 9 AM CST wind gusts of 30 to 35 mph (26-30 kt) out of the southwest were already being reported. The first High Wind report of 66 mph (57 kt) came in at 10:50 AM CST from the Oklahoma Mesonet site at Kenton (Cimarron County).

As the day progressed, mixing continued to bring stronger winds aloft to the surface. The 6 PM CST upper air sounding from Amarillo showed that winds from as high as 500mb, where winds were 75 to 86 mph (65 to 75 kt), were able to mix down to the surface. This culminated in a max wind gust for the Oklahoma Panhandle of 67 mph (58 kt) at the Oklahoma Mesonet site in Kenton (Cimarron County).

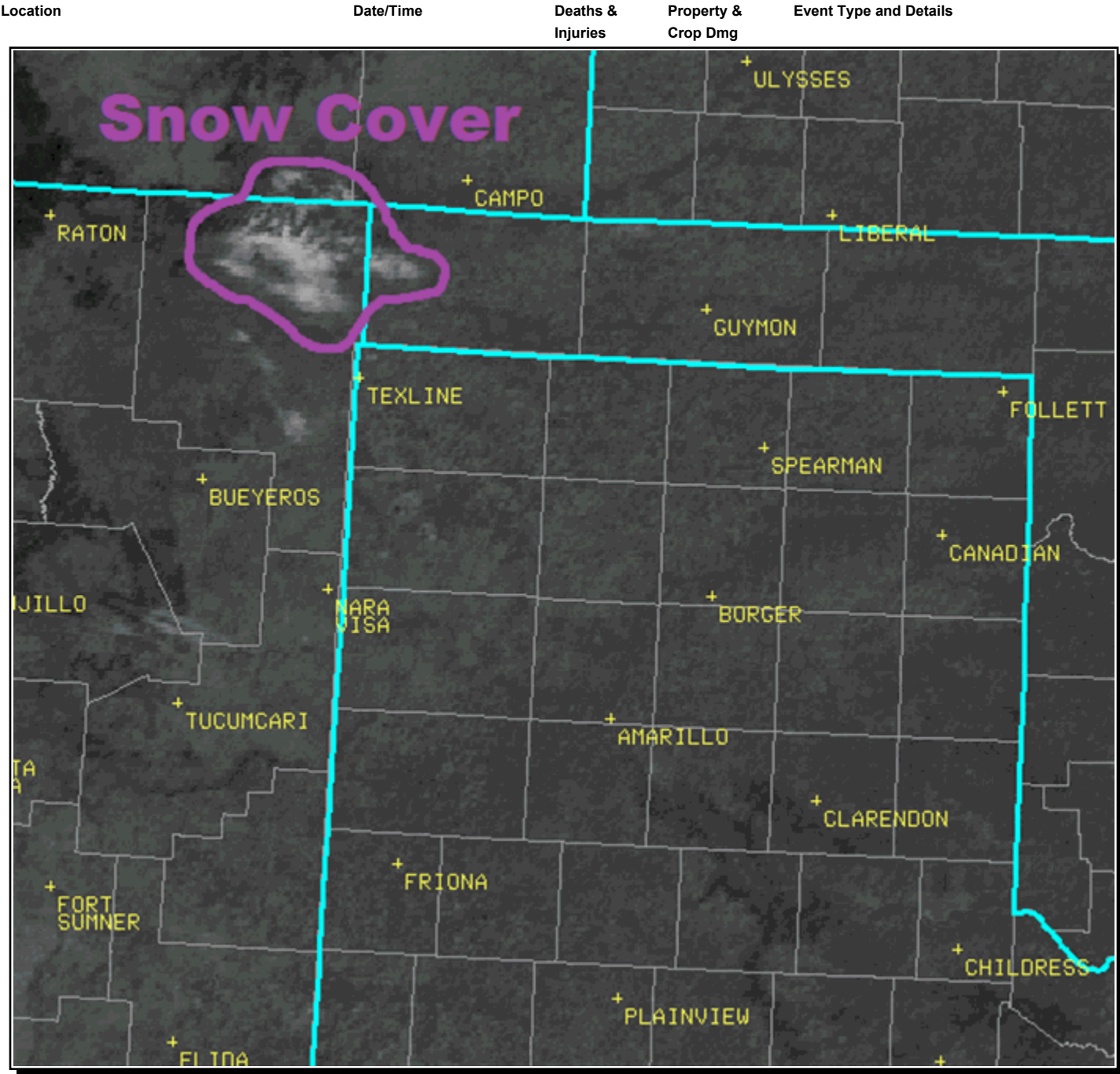
The Emergency Manager for Beaver County relayed a report of a large outbuilding in Clear Water area (Beaver County) being destroyed between 6 to 7 PM CST. Winds of 63 mph (55 kt) were estimated from radar and damage descriptions, and property damage was estimated as two thousand dollars. No reports of injuries or fatalities were reported with this damage, nor were any reported in relation to the high winds.

The following is a listing of the highest wind reports from the Oklahoma Mesonet, media mesonets, and ASOS: Kenton (Cimarron County) 67 mph; Guymon (Texas County) 64 mph; Goodwell (Texas County) 60 mph; Oklahoma Panhandle State University in Goodwell (Texas County) 58 mph; Boise City (Cimarron County) 63 mph; Balko Independent School in Balko (Beaver County) 58 mph; and Hooker (Texas County) 59 mph.

(OK-Z001) CIMARRON				
	11/11/12 19:20 CST		0	Winter Weather
	11/11/12 22:10 CST		0	

Isolated snow showers moved out of northeast New Mexico and into the extreme western Oklahoma Panhandle during the evening hours on November 11th. The snow showers formed behind an upper level trough which had moved into the Central Plains earlier in the day. The snow showers were not long lived and dissipated roughly 3 hours after forming. The cooperative observer 2 miles west-northwest of Wheelless (Cimarron County) reported up to an inch of accumulated snow. No accidents or injuries were reported in association with the snow showers or snow accumulation.

Storm Data and Unusual Weather Phenomena - November 2012



Visible satellite imagery in AWIPS from the morning of the 12th showing the snow accumulations over Cimarron County, Oklahoma.

OKLAHOMA, Western, Central and Southeast

(OK-Z004) HARPER, (OK-Z005) WOODS, (OK-Z006) ALFALFA, (OK-Z007) GRANT, (OK-Z008) KAY, (OK-Z009) ELLIS, (OK-Z010) WOODWARD, (OK-Z011) MAJOR, (OK-Z012) GARFIELD, (OK-Z013) NOBLE, (OK-Z014) ROGER MILLS, (OK-Z015) DEWEY, (OK-Z016) CUSTER, (OK-Z017) BLAINE, (OK-Z018) KINGFISHER, (OK-Z019) LOGAN, (OK-Z020) PAYNE, (OK-Z021) BECKHAM, (OK-Z022) WASHITA, (OK-Z023) CADDO, (OK-Z024) CANADIAN, (OK-Z025) OKLAHOMA, (OK-Z026) LINCOLN, (OK-Z027) GRADY, (OK-Z028) MCCLAIN, (OK-Z029) CLEVELAND, (OK-Z030) POTTAWATOMIE, (OK-Z031) SEMINOLE, (OK-Z032) HUGHES, (OK-Z033) HARMON, (OK-Z034) GREER, (OK-Z035) KIOWA, (OK-Z036) JACKSON, (OK-Z037) TILLMAN, (OK-Z038) COMANCHE, (OK-Z039) STEPHENS, (OK-Z040) GARVIN, (OK-Z041) MURRAY, (OK-Z042) PONTOTOC, (OK-Z043) COAL, (OK-Z044) COTTON, (OK-Z045) JEFFERSON, (OK-Z046) CARTER, (OK-Z047) JOHNSTON, (OK-Z048) ATOKA, (OK-Z050) LOVE, (OK-Z051) MARSHALL, (OK-Z052) BRYAN

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Very few rainfall events occurred during the month of November over Oklahoma. This allowed drought conditions to persist or even worsen in some areas.

ROGER MILLS COUNTY --- DURHAM [35.84, -99.92]

11/10/12 19:25 CST	5K	Hail (1.75 in)
11/10/12 19:25 CST	0	Source: Emergency Manager

Quarter to golf ball sized hail was reported in Durham. The hail resulted in damage to several home windows.

ROGER MILLS COUNTY --- 7.9 NNE DURHAM [35.94, -99.85]

11/10/12 19:30 CST	0	Hail (1.75 in)
11/10/12 19:30 CST	0	Source: Emergency Manager

No damage was reported.

ROGER MILLS COUNTY --- CRAWFORD [35.83, -99.80]

11/10/12 19:30 CST	0	Hail (1.00 in)
11/10/12 19:30 CST	0	Source: Emergency Manager

No damage was reported.

ROGER MILLS COUNTY --- 10.2 NNE DURHAM [35.98, -99.86]

11/10/12 19:35 CST	0	Hail (1.00 in)
11/10/12 19:35 CST	0	Source: Public

No damage was reported.

A large upper trough developed over the western U.S. with upper level winds supportive of severe storms. At the surface, a cold front and dryline surged into western Oklahoma during the late afternoon and evening hours on the 10th. Despite very favorable wind fields and forcing for severe storms, lack of quality moisture kept most storms below severe levels. A couple of storms, however, managed to become severe and produce large hail and damaging wind gusts.

OREGON, Central and East

(OR-Z509) EAST SLOPES OF THE OREGON CASCADES

11/08/12 13:30 PST	0	Heavy Snow
11/09/12 05:00 PST	0	

A combination of: fairly high snow levels, south flow, and abundant moisture resulted in heavy snow the evening of the 8th through the morning of the 9th. Areas affected by the snow showers were La Pine, Three Rivers, and Sunriver. This was a very localized but significant snowfall event for areas south of Bend, OR.

Snowfall amounts reported in inches included: (8.0) in La Pine, (12.0) 6 miles north of La Pine, (8.0) 5 miles north of La Pine, (12.0) 7 miles north of La Pine.

Snowfall amounts reported in inches the next morning included: (11.0) 3 miles west northwest of La Pine, (11.5) at Three Rivers, and (12.5) 5 north northwest of La Pine.

(OR-Z042) NORTH CENTRAL OREGON, (OR-Z050) WALLOWA COUNTY, (OR-Z503) SOUTHERN BLUE MOUNTAINS, (OR-Z505) JOHN DAY BASIN, (OR-Z506) OCHOCO-JOHN DAY HIGHLANDS, (OR-Z507) FOOTHILLS OF THE NORTHERN BLUE MOUNTAINS OF OREGON, (OR-Z508) FOOTHILLS OF THE SOUTHERN BLUE MOUNTAINS OF OREGON, (OR-Z509) EAST SLOPES OF THE OREGON CASCADES

11/19/12 08:02 PST	0.12M	High Wind (MAX 63 kt)
11/19/12 22:30 PST	0	

A strong upper level jet and tight surface pressure gradients aided in high winds across much of the Pendleton County Warning Area.

Measured gusts in MPH include: Ruggs (67), Long Creek (62), 5 NNE of Fox (70), 2 W Benton City (68), 5 S of Deschutes River Woods (60), 5 Wsw Shaniko (62), 2 SSW Grass Valley (58), 7 ESE Maupin (64), 1 W Joseph (68), East Enterprise (68), 3 N Joseph (67), 8 NW West Richland (58), 13 NNW Dayville (70), 6 SE Pendleton (60), 6 NE Mitchell (73), 5 WNW Ruggs (65), Lexington had a high sustained wind for a couple of hours (43), and Pine Mountain Observatory south of Bend (72).

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Other reports of wind damage include: County wide power outage in Wallowa, a large tree came down on Bear Creek Road and took down several power poles, over 2200 people lost power in Bend, 1 NNE of Tumalo lost Carport blown to neighbor's yard, a house fire in the Bend area, at Deschutes River Woods a branch went through the roof of a house, 31 N Long Creek trees were down blocking highway 395, 13 NNW Dayville had an outhouse blown over and other objects thrown around, 6 SE Pendleton had a 7 inch diameter tree branch snapped off, 4 S Pendleton had two trees split in half, W Mitchell had a 48ft cow trailer blown over by the strong winds, and 6 NE Mitchell had patio furniture damaged and was thrown around and two haystacks destroyed.

OREGON, Northwest

(OR-Z001) NORTHERN OREGON COAST

11/11/12 16:15 PST	0	High Wind (MAX 43 kt)
11/12/12 02:24 PST	0	

A vigorous pacific frontal system brought strong winds to the Oregon Coast.

(OR-Z001) NORTHERN OREGON COAST, (OR-Z002) CENTRAL OREGON COAST, (OR-Z003) COAST RANGE OF NW OREGON, (OR-Z004) CENTRAL COAST RANGE OF W OREGON

11/18/12 17:35 PST	1	1.25M	High Wind (MAX 85 kt)
11/19/12 15:25 PST	0		

Direct Fatalities: M??UT

A strong pacific frontal system brought high winds to the Coast and coast range of Northwest Oregon.

TILLAMOOK COUNTY --- 0.5 E NEHALEM [45.72, -123.89], 0.4 SSE NEHALEM [45.72, -123.90], 0.8 SSE NEHALEM [45.71, -123.89], 0.8 SE NEHALEM [45.71, -123.89]

11/19/12 09:33 PST	0	Flood (due to Heavy Rain)
11/21/12 06:36 PST	0	Source: Official NWS Observations

Heavy rain resulted in the Nehalem River overflowing its banks and flooding surrounding low-level areas. The Nehalem River at Foss crested at 17.3 feet on November 19th at 3 pm 3.3 feet above flood stage.

TILLAMOOK COUNTY --- 2.4 SW IOAVILLE [45.47, -123.90], 0.4 NNW IOAVILLE [45.51, -123.88], 1.2 NW JUNO [45.48, -123.85], 0.7 NNE TILLAMOOK [45.46, -123.85]

11/19/12 10:18 PST	0	Flood (due to Heavy Rain)
11/20/12 00:18 PST	0	Source: Other Federal Agency

Heavy rain caused the Wilson River near Tillamook to overflow its banks and flood low lying areas. The Wilson River crested at 14.7 feet, 2.7 feet above flood stage, on November 19th at 4 pm PST.

COLUMBIA COUNTY --- 0.4 NNE VERNONIA [45.86, -123.20], 1.3 WNW VERNONIA ARPT [45.85, -123.26], 2.0 SW VERNONIA ARPT [45.83, -123.26], 1.3 NNW BRAUN [45.82, -123.23], 0.9 SSE VERNONIA [45.84, -123.19]

11/19/12 12:25 PST	0	Flood (due to Heavy Rain)
11/19/12 21:20 PST	0	Source: Other Federal Agency

Heavy rain caused the Nehalem River near Vernonia to overflow its banks and flood low lying areas. The Nehalem River crested at 13.4 feet, 1.4 feet above flood stage, on November 19th at 5 pm PST.

LINCOLN COUNTY --- 0.9 SE SILETZ [44.71, -123.89], 1.3 WSW CAMP TWELVE [44.71, -123.95], 1.4 WNW CAMP TWELVE [44.73, -123.94], 1.3 N CAMP TWELVE [44.74, -123.92], 0.9 N SILETZ [44.73, -123.90]

11/19/12 17:07 PST	0	Flood (due to Heavy Rain)
11/19/12 21:52 PST	0	Source: Other Federal Agency

Heavy rain caused the Siletz River near Siletz to overflow its banks and flood low lying areas. The Siletz River crested at 16.8 feet on January 19th at 6 pm PST, 0.8 feet above flood stage.

LINCOLN COUNTY --- 3.7 N DENZER BRIDGE [44.38, -123.82], 3.8 NNW DENZER BRIDGE [44.38, -123.84], 2.5 SE TIDEWATER [44.39, -123.87], 2.5 S TIDEWATER [44.38, -123.90], 3.9 SSE BAYVIEW [44.40, -123.99], 3.0 SE BAYVIEW [44.42, -123.98], 0.3 SW TIDEWATER [44.42, -123.90], 3.7 ESE TIDEWATER [44.40, -123.83]

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/19/12 20:26 PST		0	Flood (due to Heavy Rain)
	11/20/12 01:29 PST		0	Source: Other Federal Agency
Heavy rain caused the Alsea River near Tidewater to overflow its banks, causing flooding to the surrounding area. The Alsea River crested at 18.9 feet on January 19th at 11 pm PST, 0.9 feet above flood stage.				
BENTON COUNTY --- 1.7 S CONROY [44.53, -123.33], 0.5 WNW CONROY [44.55, -123.34], 2.1 N FLYNN [44.56, -123.38], 2.3 NE WREN [44.60, -123.39], 0.6 SSW DEVITT [44.61, -123.53], 1.4 SW ALDER [44.57, -123.52], 0.7 S PHILOMATH [44.52, -123.37]				
	11/19/12 21:08 PST		0	Flood (due to Heavy Rain)
	11/20/12 06:21 PST		0	Source: Other Federal Agency
Heavy rain caused the Marys River near Philomath to overflow its banks and cause flooding to surrounding areas. The Marys River crested at 20.6 feet on January 19th at 11 pm PST, 0.6 feet above flood stage.				
LANE COUNTY --- 1.5 ESE MAPLETON [44.02, -123.84], 1.8 S MAPLETON [44.00, -123.86], 2.3 WSW TIERNAN [44.01, -123.97], 0.9 SE CUSHMAN [43.97, -124.04], 1.1 N CUSHMAN [44.00, -124.05], 2.6 NE WENDSON [44.03, -123.98], 0.8 N POINT TERRACE [44.03, -123.90], 1.3 NNE MAPLETON [44.05, -123.86]				
	11/19/12 22:15 PST		0	Flood (due to Heavy Rain)
	11/21/12 01:30 PST		0	Source: Other Federal Agency
Heavy rain caused the Siuslaw River near Mapleton to overflow its banks, causing flooding to surrounding areas. The Siuslaw River crested at 18.3 feet on January 19th at 11 pm PST, 0.3 feet above flood stage.				
CLACKAMAS COUNTY --- 2.2 ESE ESTACADA ARPT [45.29, -122.28], 2.3 S ESTACADA [45.25, -122.33], 1.4 ENE REDLAND [45.36, -122.47], 1.0 WSW PARK PLACE [45.37, -122.60], 0.6 NNE GLADSTONE [45.39, -122.61], 1.4 SW HAPPY VLY [45.42, -122.52], 1.6 NNW EAGLE CREEK [45.39, -122.38]				
	11/20/12 04:00 PST		0	Flood (due to Heavy Rain)
	11/20/12 10:00 PST		0	Source: Other Federal Agency
Heavy rain caused the Clackamas River at Estacada to overflow its banks and flood low lying areas. The Clackamas River crested at 20.0 feet on January 20th at 9 pm PST, right at flood stage.				
POLK COUNTY --- 0.6 S BUENA VISTA [44.76, -123.15], 3.3 SE SUVER [44.72, -123.15], 0.7 SE SIMPSON [44.76, -123.29], 6.1 S RITNER [44.64, -123.44], 6.7 WSW RITNER [44.70, -123.56], 4.3 WNW BLACK ROCK [44.89, -123.56], 2.8 NE FALLS CITY [44.90, -123.39]				
	11/20/12 07:43 PST		0	Flood (due to Heavy Rain)
	11/21/12 09:37 PST		0	Source: Other Federal Agency
Heavy rain caused the Luckiamute River at Suver to overflow its banks causing flooding to surrounding areas. The Luckiamute River crested at 28.3 feet on January 20th at 3 pm PST, 1.3 feet above flood stage.				
CLACKAMAS COUNTY --- 2.4 NNW CANBY [45.30, -122.72], 1.1 SSW NEW ERA [45.29, -122.68], 1.7 S BARLOW [45.23, -122.73], 0.4 SW NEEDY [45.17, -122.74], 3.4 W LENHARDT ARPT [45.18, -122.82], 2.3 WNW BARLOW [45.26, -122.77]				
	11/21/12 14:02 PST		0	Flood (due to Heavy Rain)
	11/24/12 11:00 PST		0	Source: Other Federal Agency
Heavy rain caused the Pudding River at Aurora to overflow its banks and flood low lying areas. The Pudding River crested at 23.6 feet on January 22th at 10 pm PST, 1.6 feet above flood stage.				
A strong warm front lifted north across the region accompanied by heavy rain on Sunday. Widespread heavy rain continued to impact the Pacific Northwest Monday and Monday night as the strong and very moist front stalled over the area.				
LINCOLN COUNTY --- 10.0 S (JNW)NEWPORT ARPT [44.44, -124.05]				
	11/20/12 11:29 PST		0	Thunderstorm Wind (EG 62 kt)
	11/20/12 22:14 PST		0	Source: Department of Highways
Strong winds were reported at the Yaquina Bay Bridge in Newport with gusts to 58 kts. Wind gusts of 62 kts were also reported at Yachats.				
Vigorous showers moved across the Central Oregon Coast and produced strong wind gusts.				
(OR-Z009) WESTERN COLUMBIA RIVER GORGE				
	11/28/12 11:25 PST		0	High Wind (MAX 63 kt)
	11/28/12 13:35 PST		0	

High pressure across Eastern Oregon and Eastern Washington produced strong East winds through the West end of the Columbia River Gorge.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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OREGON, Southwest

(OR-Z021) SOUTH CENTRAL OREGON COAST, (OR-Z022) CURRY COUNTY COAST, (OR-Z024) EASTERN CURRY COUNTY & JOSEPHINE COUNTY, (OR-Z028) SISKIYOU MOUNTAINS & SOUTHERN OREGON CASCADES, (OR-Z030) NORTHERN & EASTERN KLAMATH COUNTY & WESTERN LAKE COUNTY, (OR-Z031) CENTRAL & EASTERN LAKE COUNTY

11/18/12 16:00 PST	0	High Wind (MAX 91 kt)
11/21/12 03:00 PST	0	

After a stretch of quiet weather, several incoming fronts brought high winds to portions of southern Oregon.

CURRY COUNTY --- GOLD BEACH [42.25, -124.42], 2.9 N CARPENTERVILLE [42.26, -124.34], 1.7 SSE HARBOR [42.03, -124.25], 1.3 SW (4BK)BROOKINGS [42.04, -124.30]

11/19/12 14:05 PST	0	Flood (due to Heavy Rain)
11/21/12 19:11 PST	0	Source: Newspaper

The Curry Coastal Pilot reported widespread flooding in Brookings, Gold Beach, Pistol River, Harbor, and the Winchuck River. River's Edge RV park near the mouth of the Chetco had to be evacuated. The city of Brookings had flooded streets, stores and houses. Rainfall totals between 18/0800 PST and 21/0800 PST included 11.08 inches 3NE Harbor, 9.40 inches at Red Mound RAWWS, 8.59 inches 1S Gold Beach, 8.56 inches 5E Port Orford, 6.88 inches at Agness RAWWS, and 6.75 inches at Brookings Airport.

JOSEPHINE COUNTY --- (SXT)SEXTON SUMMIT [42.62, -123.37], CAVE JCT [42.17, -123.65], O BRIEN [42.07, -123.70], 2.6 S JEROME PRAIRIE [42.36, -123.42]

11/19/12 14:05 PST	0	Flood (due to Heavy Rain)
11/21/12 19:11 PST	0	Source: Official NWS Observations

Rainfall totals between 18/0800 and 21/0800 PST included 6.19 inches 1SW OBrien, 4.95 inches at the Sexton Summit ASOS, 4.27 inches at Illinois Valley Airport, and 2.10 inches 2 SW Provolt. No widespread flooding was reported, but there was flooding near small streams, in low-lying areas...and in urban areas.

A long period of heavy rain brought flooding to Curry and Josephine counties in southwest Oregon.

COOS COUNTY --- 1.0 W MYRTLE PT [43.07, -124.15], 1.3 WSW MYRTLE PT [43.06, -124.15], 1.0 SW MYRTLE PT [43.06, -124.15], 0.8 W MYRTLE PT [43.07, -124.15]

11/20/12 14:00 PST	0	Flood (due to Heavy Rain)
11/21/12 03:30 PST	0	Source: Other Federal Agency

The South Fork of the Coquille River at Myrtle Point exceeded minor flood stage (33.0 feet) at 20/1400 PST, exceeded moderate flood stage (35.0 feet) at 20/1645 PST, fell below 35.0 feet at 20/2000 PST, and fell below 33.0 feet at 21/0345 PST.

A long period of heavy rain led to flooding on the South Fork of the Coquille River at Myrtle Point.

COOS COUNTY --- 0.6 N CEDAR PT [43.18, -124.20], 0.5 NNW CEDAR PT [43.18, -124.20], 0.2 NE CEDAR PT [43.17, -124.20], 0.6 ENE CEDAR PT [43.17, -124.19]

11/20/12 18:00 PST	0	Flood (due to Heavy Rain)
11/22/12 21:00 PST	0	Source: Other Federal Agency

The Coquille River at Coquille exceeded minor flood stage (21.0 feet) at 20/1800 PST, exceeded moderate flood stage (23.0 feet) at 21/0330 PST, fell below 23.0 feet at around 22/0415 PST, and fell below 21.0 feet at 22/2100 PST.

A long period of heavy rain led to flooding on the Coquille River at Coquille.

(OR-Z021) SOUTH CENTRAL OREGON COAST, (OR-Z022) CURRY COUNTY COAST, (OR-Z028) SISKIYOU MOUNTAINS & SOUTHERN OREGON CASCADES, (OR-Z030) NORTHERN & EASTERN KLAMATH COUNTY & WESTERN LAKE COUNTY

11/27/12 21:39 PST	0	High Wind (MAX 91 kt)
11/29/12 20:13 PST	0	

Another strong cold front brought high winds to parts of southern Oregon.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
CURRY COUNTY --- GOLD BEACH [42.25, -124.42], 6.4 NW BROOKINGS STATE ARPT [42.13, -124.38], 2.7 S (4BK)BROOKINGS [42.01, -124.29], 1.4 ENE HARBOR [42.06, -124.25], 2.0 WNW CARPENTERVILLE [42.23, -124.37]				
	11/29/12 05:41 PST		4M	Flood (due to Heavy Rain)
	11/29/12 18:36 PST		0	Source: Newspaper

The Curry Coastal Pilot reported over 2 million dollars in infrastructure damage in Brookings and another 2 million in Curry County due to recent heavy rains. Sinkholes and overflowing sewage facilities were also reported.

JOSEPHINE COUNTY --- GRANTS PASS [42.43, -123.32], O BRIEN [42.07, -123.70], 7.7 WNW O BRIEN [42.11, -123.84], 0.8 SE MERLIN [42.51, -123.41]				
	11/29/12 05:41 PST		4M	Flood (due to Heavy Rain)
	11/29/12 18:36 PST		0	Source: Trained Spotter

Spotters reported up to five inches of rain along with localized flooding with this storm. Local roads near OBrien were flooded in four different places.

Another round of heavy rain impacted the already soaked south Coast...bringing flooding to the area.

(OR-Z021) SOUTH CENTRAL OREGON COAST, (OR-Z022) CURRY COUNTY COAST				
	11/30/12 17:48 PST		0	High Wind (MAX 61 kt)
	11/30/12 23:59 PST		0	

Yet another strong cold front brought high winds to the southern Oregon coast and Coast Range.

PACIFIC

(GU-Z002) MICRONESIA				
	11/26/12 22:00 GST		25K	Tropical Storm
	11/28/12 18:00 GST		5K	

Tropical Depression 26W developed about 230 miles south-southwest of Pohnpei Island in Pohnpei State of the Federated States of Micronesia around 0400 GST the morning of 26 November. Initially, TD 26W moved west-northwest toward the island of Nukuoro, but after reaching a position 80 miles northeast of Nukuoro at 2200 GST the evening of the 26th it stalled, moving slowly and erratically about 70 miles east-northeast to northeast of Nukuoro from 0400 GST the morning of the 27th until 2200 GST that evening. During that time, TD 26W intensified into Tropical Storm Bopha at 1000 GST. Bopha then started a steady westward track at 10 to 15 mph, passing 50 miles north of Nukuoro with maximum surface winds of 50 mph at 0400 GST on the 28th, then moving into Chuuk State around 1200 GST, about 100 miles northwest of Nukuoro. This track took Bopha quickly past the Mortlock Islands south of Chuuk, passing about 55 miles south of the island of Lukunor at 1300 GST the afternoon of the 28th with maximum surface winds of 60 mph. Tropical Storm Bopha moved quickly away from the Mortlock islands and Lukunor the rest of that afternoon and evening.

On Nukuoro, residents estimated winds at 30 to 45 mph from the morning of the 27th through the morning of the 28th. Rainfall and pressure measurements were not available. Some buildings sustained minor damage, and numerous crops were damaged or blown down; mainly bananas, papayas and bread fruit. Some minor coastal inundation was also reported. No injuries were noted. Total damage to buildings is estimated at \$7,500, and to crops \$2,500, for a total of \$10,000.

On Lukunor and neighboring islands, winds were also estimated at 30 to 45 mph as Bopha passed on the 28th. No pressure or rainfall measurements were available. There were no injuries, but significant crop and plant damage was reported. Some buildings were damaged, and damage was reported to the sea wall and the dock. Total damage is estimated at \$20,000, which includes \$10,000 of damage to the dock, \$7,500 to buildings, and 2,500 to crops.

Total damage is \$30,000 for both places.

PENNSYLVANIA, East

(PA-Z069) BUCKS				
	11/07/12 17:00 EST		0	Winter Weather
	11/08/12 00:00 EST		0	

The western fringes of an offshore nor'easter brought accumulating snow into Bucks County on the evening of the 7th. It was the only county in Eastern Pennsylvania to report more than one inch of snow. While the snow began during the afternoon of the 7th,

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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temperatures were above freezing and any accumulations were limited to grassy areas during heavier bursts. As snow continued into the evening, accumulations occurred in the lower part of the county. Representative snowfall in lower Bucks County included 4.5 inches in Morrisville and 2.0 inches in Lower Makefield Township. Less than 1,000 homes and businesses lost power in southeastern Pennsylvania. American Airlines canceled all flights in and out of Philadelphia after Noon EST on the 7th. SEPTA Regional Rail Lines experienced approximately 15 minute delays because of the snow causing slippery rail conditions.

The nor'easter was still a relatively weak low pressure system over the northeastern Gulf of Mexico on the morning of November 6th. At 7 p.m. EST on the 6th, it was located east of North Carolina and was starting to intensify. It moved to the northnortheast and at 7 a.m. EST on the 7th, the surface pressure lowered to 994 millibars and it was about 150 miles east of the Delmarva Peninsula. From there it moved very slowly to the northnortheast and intensified. At 7 p.m. EST on the 7th, its surface pressure was down to 984 millibars. Overnight, the surface pressure remained about the same and at 7 a.m. EST on the 8th, the 986 millibar nor'easter was just south of Cape Cod. The rather offshore track spared most of eastern Pennsylvania adverse weather from it.

(PA-Z054) CARBON, (PA-Z055) MONROE, (PA-Z060) BERKS, (PA-Z061) LEHIGH, (PA-Z062) NORTHAMPTON, (PA-Z067) CHESTER, (PA-Z068) MONTGOMERY, (PA-Z069) BUCKS, (PA-Z070) DELAWARE

11/27/12 04:00 EST	0	Winter Weather
11/27/12 16:00 EST	0	

A moderate snow event affected the Poconos and Lehigh Valley as well as having a greater impact on higher terrain locations in Southeast Pennsylvania during the day on the 27th. Snowfall averaged 2 to 5 inches with the highest amounts in the higher terrain. There were no serious snow related accidents reported. In the city of Philadelphia, precipitation fell as mainly rain. Precipitation started as rain in southeast Pennsylvania and as snow in Berks County, the Lehigh Valley and the Poconos between 4 a.m. EST and 7 a.m. EST on the 27th. As the precipitation intensity increased, the rain changed over to snow around 7 a.m. EST in the northwest Philadelphia suburbs and fell at its heaviest during the mid and late morning on the 27th. As the intensity decreased during the afternoon, some of the snow changed back to rain in parts of the Philadelphia northwest suburbs. The precipitation ended by 4 p.m. EST in most of the region. Temperatures were close to the freezing mark, so the snow accumulated most efficiently on grassier surfaces, bridges and less traveled roadways.

Representative snowfall included 4.7 inches in Elverson (Chester County), 4.5 inches in Albrightsville (Carbon County), Pocono Summit (Monroe County) and Glenmoore (Chester County), 4.3 inches in Saylorburg (Monroe County), 4.0 inches in Williams Township (Northampton County), 3.6 inches in Doylestown (Bucks County), 3.5 inches in Summit Hill (Carbon County), Nazareth (Northampton County) and Wayne (Delaware County), 3.3 inches in Furlong (Bucks County) and Graterford (Montgomery County), 3.2 inches in Kutztown (Berks County), 3.0 inches in Huffs Church (Berks County), Royersford (Montgomery County) and Schnecksville (Lehigh County), 2.6 inches in Allentown (Lehigh County), 2.5 inches in Quakertown (Bucks County), Pottstown (Montgomery County) and Lansdale (Montgomery County), 2.3 inches in Spring City (Chester County), 2.2 inches in Lehighton (Carbon County), 2.1 inches in Glendon (Northampton County), 2.0 inches in Villanova (Delaware County) and 1.4 inches at the Lehigh Valley International Airport.

The snow was caused by a low pressure system that moved from the Red River Valley on the morning of the 26th eastnortheast and crossed the southern Appalachians on the morning of the 27th, the southern Delmarva Peninsula during the early afternoon on the 27th and was about 150 miles east of the Southern New Jersey Coast at 7 p.m. EST on the 27th.

PUERTO RICO

(PR-Z002) NORTHEAST

11/03/12 15:00 AST	1	0	Rip Current
11/03/12 15:00 AST		0	

Direct Fatalities: M30IW

Pulses of northwest to northeast swells affected the Atlantic coastal waters and the Caribbean Passages. Seas were generally less than 7 feet.

NAGUABO COUNTY --- 0.6 S NAGUABO [18.21, -65.73], 0.4 S NAGUABO [18.21, -65.73], 0.4 SSW NAGUABO [18.22, -65.73], 0.6 SSW NAGUABO [18.21, -65.73]

11/11/12 06:00 AST	0	Flash Flood (due to Heavy Rain)
11/11/12 08:32 AST	0	Source: Emergency Manager

Road 31 was reported flooded and impassable.

A nearly stationary frontal boundary northwest of the local region combined with a surface trough to produced scattered to numerous

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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showers with isolated thunderstorms across the northeast section of Puerto Rico.

VEGA BAJA COUNTY --- 1.9 NNW VEGA BAJA [18.47, -66.39], 1.9 NW VEGA BAJA [18.47, -66.40], 2.0 NW VEGA BAJA [18.47, -66.40], 2.1 NNW VEGA BAJA [18.48, -66.40]

11/13/12 03:00 AST	80K	Flash Flood (due to Heavy Rain)
11/13/12 06:00 AST	0	Source: Emergency Manager

Ojo de Agua, Los Naranjos, Las Carmelitas, Río Abajo, Villarreal y Sandín sectors in the municipality of Vega Baja were reported flooded 16 families were evacuated.

A stationary front combined with an upper level trough to our west to produced scattered to numerous showers along the north coast of Puerto Rico. The heaviest rainfall occurred over the municipalities of Vega Alta and Vega Baja.

ARECIBO COUNTY --- 7.6 WNW ARECIBO [18.48, -66.77], 5.9 NW ARECIBO [18.47, -66.74], 5.9 NW ARECIBO [18.47, -66.74], 7.6 WNW ARECIBO [18.48, -66.77]

11/18/12 17:00 AST	0	Flood (due to Heavy Rain)
11/18/12 17:45 AST	0	Source: Public

Road PR-2 between Arecibo and Hatillo was reported flooded and impassable.

Light winds combined with daytime heating and local effect to produce scattered showers with thunderstorms along the north coast of Puerto Rico.

RHODE ISLAND

(RI-Z001) NORTHWEST PROVIDENCE, (RI-Z002) SOUTHEAST PROVIDENCE

11/07/12 14:00 EST	0	Winter Weather
11/08/12 06:48 EST	0	

Low pressure moved up the east coast spreading snow, rain, and wind across southern New England. Cloudy skies coupled with evaporational cooling to keep temperatures cooler than expected which resulted in snow spread across all but the south coasts of RI and MA as well as portions of southeastern MA. This in turn resulted in higher snow accumulations across much of southern New England. In Rhode Island, accumulations ranged from less than an inch to five inches.

SOUTH CAROLINA, Central

LEXINGTON COUNTY --- 1.8 NW POOLES XRDS [33.69, -81.20]

11/04/12 15:26 EST	0	Hail (0.75 in)
11/04/12 15:28 EST	0	Source: Public

Public reported pea to dime size hail.

SALUDA COUNTY --- 0.6 E MONETTA [33.85, -81.61]

11/04/12 17:10 EST	0	Hail (1.00 in)
11/04/12 17:12 EST	0	Source: Public

Public reported quarter size hail at the intersection of Hwys 23 and 39 in Monetta.

LEXINGTON COUNTY --- 1.0 SW CONGAREE [33.89, -81.14]

11/04/12 17:44 EST	0	Hail (1.00 in)
11/04/12 17:46 EST	0	Source: Public

Public reported 1 inch hail 1 mile southwest of Congaree.

Isolated severe thunderstorms produced quarter size hail in southern Saluda and Lexington counties.

SOUTH CAROLINA, North Coastal

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
HORRY COUNTY --- 1.6 E BROWNWAY [33.80, -79.14]				
	11/04/12 16:35 EST		2K	Hail (1.00 in)
	11/04/12 16:40 EST		0	Source: Public
Hail to the size of quarters was reported near the intersection of Dongola Highway and Kates Bay Highway.				
HORRY COUNTY --- 0.7 S JALUCO [33.76, -78.98]				
	11/04/12 16:40 EST		2K	Hail (1.00 in)
	11/04/12 16:50 EST		0	Source: Public
Hail to the size of quarters was reported at the Legends Golf Resort.				
HORRY COUNTY --- 1.7 SE JALUCO [33.75, -78.96]				
	11/04/12 16:55 EST		2K	Hail (1.00 in)
	11/04/12 17:05 EST		0	Source: Public
Hail to the size of quarters was reported at the Tanger Outlet Mall on Highway 501.				
HORRY COUNTY --- 3.2 S GRAHAMVILLE [33.77, -78.91]				
	11/04/12 16:55 EST		2K	Hail (1.00 in)
	11/04/12 17:05 EST		0	Source: Public
Hail to the size of quarters was reported on Birnamwood Court.				
HORRY COUNTY --- 3.8 NNE OCEAN FOREST [33.78, -78.80]				
	11/04/12 17:00 EST		0.25K	Hail (0.75 in)
	11/04/12 17:10 EST		0	Source: Public
Hail to the size of pennies was reported near the Dunes Golf Course.				
GEORGETOWN COUNTY --- 0.9 SSE WACHESAW LNDG [33.56, -79.08]				
	11/04/12 17:38 EST		5K	Hail (1.00 in)
	11/04/12 17:48 EST		0	Source: Public
Hail to the size of quarters was reported. The hail lasted for about 10 minutes.				
GEORGETOWN COUNTY --- 1.4 S WACHESAW LNDG [33.55, -79.08], 0.4 ESE MURRELLS INLET [33.55, -79.04]				
	11/04/12 17:40 EST		25K	Hail (1.75 in)
	11/04/12 17:58 EST		0	Source: Public
Hail to the size of golf balls covered the landscape to include roadways, homes and vehicles. Cars were reportedly damaged. The hail took some tree limbs down and stripped leaves.				
HORRY COUNTY --- 1.3 WSW GARDEN CITY [33.57, -79.02]				
	11/04/12 17:40 EST		3K	Hail (1.00 in)
	11/04/12 17:55 EST		0	Source: Public
Hail to the size of quarters was reported.				
GEORGETOWN COUNTY --- 1.0 SSW MURRELLS INLET [33.54, -79.06]				
	11/04/12 17:45 EST		0.50K	Hail (1.00 in)
	11/04/12 17:50 EST		0	Source: Public
Hail to the size of quarters was reported along Pendergrass Avenue.				
HORRY COUNTY --- 0.8 N GARDEN CITY [33.59, -79.00]				
	11/04/12 17:45 EST		1.50K	Hail (1.00 in)
	11/04/12 17:55 EST		0	Source: Public
Hail to the size of quarters was reported on Salters Road near the intersection with Highway 17 Business.				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
FLORENCE COUNTY --- 0.8 NNW BAZEN XRDS [33.91, -79.53]				
	11/04/12 17:58 EST		1K	Hail (1.00 in)
	11/04/12 18:01 EST		0	Source: Law Enforcement

Hail to the size of quarters was reported along South Pamplico Highway.

Severe thunderstorms developed along and behind a cold front aligned roughly along the Grand Strand. Hail up to the size of golf balls was reported. Hail accumulated to a significant depth in several locations. In the aftermath of the storms, some areas fogged in as the low levels cooled rapidly where the hail remained on the ground for some length of time. Murrells Inlet, South Carolina was especially hard hit as slick roads and reduced visibility caused numerous accidents. Highway 17 was closed for a time.



A severe hail storm occurred on the evening of 11/04/12. Hail persisted for more than 10 minutes for some locations in and around Murrells Inlet, South Carolina. The hail was as large as golf balls and resulted in property damage. There were reports of up to a few inches of accumulation. The hail took a few hours to completely melt. A blanket of dense fog developed as a sharp surface inversion developed over the cold ground. Numerous accidents were reported as a result of slick roads and reduced visibility. The photo was taken by the Director of Communications for Horry County Public Safety, Angie E. Illhardt.

(SC-Z054) COASTAL HORRY				
	11/15/12 08:00 EST		0	Coastal Flood
	11/15/12 10:00 EST		0	

An unusually high astronomical tide caused coastal flooding along the coast of North and South Carolina.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
SOUTH CAROLINA, South Coastal				

COLLETON COUNTY --- 2.2 SE CANADYS [33.03, -80.59]

11/04/12 16:06 EST	0.50K	Thunderstorm Wind (EG 50 kt)
11/04/12 16:07 EST	0	Source: Law Enforcement

South Carolina Highway Patrol reported a tree down on Round O Road, south of State Road 61.

HAMPTON COUNTY --- 3.5 N NIXVILLE [32.80, -81.16]

11/04/12 16:32 EST	0.50K	Thunderstorm Wind (EG 50 kt)
11/04/12 16:33 EST	0	Source: Law Enforcement

South Carolina Highway Patrol reported a tree down at US 601 South and Clifton Drive.

DORCHESTER COUNTY --- 2.7 SE SUMMERVILLE [32.99, -80.15]

11/04/12 16:55 EST	0	Hail (1.00 in)
11/04/12 16:56 EST	0	Source: Trained Spotter

A spotter reported quarter sized hail on Black River Drive.

COLLETON COUNTY --- 5.0 SSW STOKES [32.90, -80.74]

11/04/12 17:21 EST	0.50K	Thunderstorm Wind (EG 50 kt)
11/04/12 17:22 EST	0	Source: Law Enforcement

South Carolina Highway Patrol reported a tree down on Cypress Pond Road.

Within a warm sector south and southeast of a surface low pressure system and an associated cold front, thunderstorms fired along pre-frontal mesoscale boundaries early in the afternoon and advanced east across the forecast area through the evening. A combination of parameters supported multi-cell convection and a few severe thunderstorms damaging wind gusts and quarter sized hail.

(SC-Z050) CHARLESTON

11/15/12 09:15 EST	0	Coastal Flood
11/15/12 10:30 EST	0	

Persistent and strong northeast winds and the occurrence of the perigean spring tides resulted in an abnormally high morning high tide cycle. The high tidal departures resulted in flooding near the Charleston County coast.

SOUTH DAKOTA, Central and North

(SD-Z003) CORSON, (SD-Z004) CAMPBELL, (SD-Z005) MCPHERSON, (SD-Z006) BROWN, (SD-Z008) ROBERTS, (SD-Z009) WALWORTH, (SD-Z010) EDMUNDS, (SD-Z015) DEWEY, (SD-Z016) POTTER, (SD-Z017) FAULK, (SD-Z018) SPINK, (SD-Z019) CLARK, (SD-Z020) CODINGTON, (SD-Z021) GRANT, (SD-Z022) HAMLIN, (SD-Z023) DEUEL, (SD-Z033) STANLEY, (SD-Z034) SULLY, (SD-Z035) HUGHES, (SD-Z036) HYDE, (SD-Z037) HAND, (SD-Z045) JONES, (SD-Z048) LYMAN, (SD-Z051) BUFFALO

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Drought conditions expanded and worsened throughout November across central and northeast South Dakota. Exceptional to extreme drought conditions covered much of central and north central South Dakota by the end of November. There was also an area of extreme drought conditions felt across east central South Dakota including the counties of Grant, Deuel, eastern Codington, and eastern Hamlin. Severe drought conditions covered much of the rest of the region except for Day and Marshall counties. On average, calculated soil moisture anomalies were showing deficits from 3 to 6 inches. Winter wheat continued to suffer as a result of the drought. The grassland fire danger also continued to be an issue throughout November.

SOUTH DAKOTA, Southeast

(SD-Z038) BEADLE, (SD-Z039) KINGSBURY, (SD-Z040) BROOKINGS, (SD-Z050) GREGORY, (SD-Z052) JEREAULD, (SD-Z053) SANBORN, (SD-Z054) MINER, (SD-Z055) LAKE, (SD-Z056) MOODY, (SD-Z057) BRULE, (SD-Z058) AURORA, (SD-Z059) DAVISON, (SD-Z060) HANSON, (SD-Z061) MCCOOK,

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(SD-Z062) MINNEHAHA, (SD-Z063) CHARLES MIX, (SD-Z064) DOUGLAS, (SD-Z065) HUTCHINSON, (SD-Z066) TURNER, (SD-Z067) LINCOLN, (SD-Z068) BON HOMME, (SD-Z069) YANKTON, (SD-Z070) CLAY, (SD-Z071) UNION				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

Drought conditions continued over all of southeast South Dakota in November with below to well below normal rainfall keeping soil dry. Rainfall for the month was below normal everywhere, and less than a quarter of normal in most of the area. The poor germination of winter wheat was more strongly confirmed. There were few remaining water restrictions given the much lower water usage compared with the summer and early fall, but the low soil moisture levels presented a bleak outlook for the next spring and summer without a very significant increase in precipitation over the winter. Drought was generally listed as continued severe to extreme for the area.

SOUTH DAKOTA, West

(SD-Z027) SOUTHERN FOOT HILLS, (SD-Z029) SOUTHERN BLACK HILLS, (SD-Z041) FALL RIVER, (SD-Z042) SHANNON				
	11/25/12 13:00 MST		0	Winter Weather
	11/26/12 05:00 MST		0	

A storm system brought snow to much of western South Dakota. Accumulations during the daytime hours were mostly light as some melting occurred. The heaviest snow fell across portions of southwestern South Dakota after sunset, where four to six inches of total accumulation was reported.

TENNESSEE, Central

DICKSON COUNTY --- 1.6 SSW DULL [36.20, -87.29]				
	11/03/12 16:00 CST		1K	Thunderstorm Wind (EG 55 kt)
	11/03/12 16:00 CST		0	Source: Trained Spotter

A tree was downed along State Highway 49. Nickel sized hail was also reported.

DICKSON COUNTY --- 0.9 WSW COLESBURG [36.06, -87.36]				
	11/03/12 16:09 CST		0	Funnel Cloud
	11/03/12 16:09 CST		0	Source: Public

DAVIDSON COUNTY --- 0.4 ENE GOODLETTSVILLE [36.32, -86.71]				
	11/03/12 16:20 CST		0	Hail (1.00 in)
	11/03/12 16:20 CST		0	Source: CoCoRaHS

DAVIDSON COUNTY --- 0.8 WNW PASQUO [36.03, -86.98]				
	11/03/12 16:33 CST		5K	Thunderstorm Wind (EG 55 kt)
	11/03/12 16:33 CST		0	Source: Law Enforcement

Several trees were downed along State Highway 100 west of Bellevue.

As a line of thunderstorms moved through Dickson and Davidson Counties during the afternoon hours on Saturday, November 3rd, a few thunderstorms reached severe thresholds with thunderstorm wind damage, large hail, and even a funnel cloud reported in Dickson County.

TENNESSEE, South Central

(TN-Z097) FRANKLIN				
	11/01/12 01:00 CST		0	Frost/Freeze
	11/01/12 08:00 CST		0	

Low temperatures reached the lower to mid 20s across southern middle Tennessee on the morning of the 1st.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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TENNESSEE, West

(TN-Z001) LAKE, (TN-Z002) OBION, (TN-Z003) WEAKLEY, (TN-Z004) HENRY, (TN-Z019) DYER, (TN-Z020) GIBSON, (TN-Z048) LAUDERDALE, (TN-Z049) TIPTON, (TN-Z050) HAYWOOD, (TN-Z051) CROCKETT, (TN-Z088) SHELBY, (TN-Z089) FAYETTE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Beneficial rain continued during the month of November which helped improve drought conditions across Northwest Tennessee and extreme West Tennessee while portions of West Tennessee near the Tennessee River saw conditions deteriorate slightly. By the end of the month, only severe (D2) drought conditions remained across Weakley and Henry Counties. Pastures continued to green up due to the rain. Lake and river levels also continued to improve.

SHELBY COUNTY --- 2.0 N BARTLETT [35.23, -89.88], 1.8 NE LENOW [35.20, -89.73]

11/03/12 16:10 CST	0	Hail (1.75 in)
11/03/12 16:28 CST	0	Source: Trained Spotter

Quarter to Golfball size hail fell in a corridor from Bartlett to Lakeland.

SHELBY COUNTY --- 2.4 W NEW SOUTH MEMPHIS [35.10, -90.12]

11/03/12 16:35 CST	0	Hail (1.00 in)
11/03/12 16:40 CST	0	Source: Trained Spotter

Quarter size hail fell at Presidents Island.

A cold front moved through the Mid-South during the afternoon hours of November 3rd. Showers and thunderstorms developed as the front approached Interstate 40 and interacted with an increasingly moist and unstable airmass. A few of the storms produced large hail.

TEXAS, Central

(TX-Z049) FISHER, (TX-Z078) SUTTON, (TX-Z098) HASKELL, (TX-Z099) THROCKMORTON, (TX-Z113) JONES, (TX-Z114) SHACKELFORD, (TX-Z140) BROWN, (TX-Z155) SAN SABA, (TX-Z169) KIMBLE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The drought continues to intensify mainly north of Interstate 20, while the drought continues to expand over portions of the Northern Edwards Plateau and the adjacent Northwest Hill Country. These areas did not receive the heavy rain that fell at the end of September.

TEXAS, Central Southeast

MONTGOMERY COUNTY --- 0.5 NNE CONROE ARPT [30.36, -95.42]

11/03/12 14:30 CST	0	Thunderstorm Wind (MG 53 kt)
11/03/12 14:30 CST	0	Source: Newspaper

There were trees and power lines downed across multiple locations around the Conroe area and off to the north and east.

MONTGOMERY COUNTY --- CONROE ARPT [30.35, -95.42]

11/03/12 14:48 CST	0	Thunderstorm Wind (MG 53 kt)
11/03/12 14:48 CST	0	Source: ASOS

SAN JACINTO COUNTY --- 0.6 E POINTBLANK [30.75, -95.22]

11/03/12 16:30 CST	0	Thunderstorm Wind (EG 50 kt)
11/03/12 16:30 CST	0	Source: Law Enforcement

There were downed trees with one tree collapsing onto a power line that caused a fire.

A pre-frontal trough ahead of a cold front provided a focus for isolated afternoon severe thunderstorms.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
GALVESTON COUNTY --- 0.1 SW LA MARQUE [29.37, -94.97], 0.3 ESE LA MARQUE [29.37, -94.97]				
	11/04/12 09:30 CST		10K	Thunderstorm Wind (EG 60 kt)
	11/04/12 09:33 CST		0	Source: NWS Storm Survey

There was wind damage to commercial building windows and minor roof damage to the fire station. One residence was damaged by a vehicle that was pivoted around and struck the home.

A severe thunderstorm developed near a cold frontal boundary that was pushing to the coast in the morning.



Commercial window damage in a strip mall across from the La Marque fire department.

MONTGOMERY COUNTY --- 2.0 ENE WILLIS [30.43, -95.45]				
	11/26/12 21:47 CST		0	Hail (1.00 in)
	11/26/12 21:47 CST		0	Source: Law Enforcement

Nickel to quarter sized hail was reported near Willis.

The combination of a cold front and an upper level disturbance generated a couple strong evening thunderstorms as the frontal boundary moved through southeast Texas. One of the storms became severe and produced some hail.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(TX-Z418) WESTERN EL PASO COUNTY				
	11/01/12 00:00 MST		0	Drought
	11/30/12 23:59 MST		0	

A continued lack of rainfall kept Far West El Paso County in Severe(D2) drought during the month.

(TX-Z419) EASTERN/CENTRAL EL PASO COUNTY				
	11/10/12 11:57 MST		0	High Wind (MAX 63 kt)
	11/10/12 14:00 MST		0	

Strong southwest winds increased ahead of an upper trough moving through the Great Basin and into the Desert Southwest. A peak wind gust of 73 mph was reported 2 miles north of Downtown El Paso.

(TX-Z421) SALT BASIN, (TX-Z422) SOUTHERN HUDSPETH HIGHLANDS, (TX-Z424) RIO GRANDE VALLEY OF EASTERN HUDSPETH COUNTY				
	11/20/12 13:00 MST		0	Drought
	11/30/12 23:59 MST		0	

A lack of rainfall brought Severe(D2) drought conditions back to portions of Far West Texas during the month of November.

TEXAS, Mid - South

(TX-Z231) LIVE OAK, (TX-Z232) BEE, (TX-Z233) GOLIAD, (TX-Z239) WEBB, (TX-Z240) DUVAL, (TX-Z241) JIM WELLS, (TX-Z242) KLEBERG, (TX-Z243) NUECES, (TX-Z244) SAN PATRICIO				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

The temperatures remained above normal for the month of November across South Texas with very dry conditions continuing for the majority of the region. Isolated areas of the Coastal Bend and Brush Country received slightly above normal rainfall. However, most of South Texas received below to well below normal rainfall during the month. Rainfall amounts were slightly above 3 inches below normal over the Victoria Crossroads to 1 to 2 inches above normal in isolated areas over the Coastal Bend. Rain amounts ranged from around 4 inches in Calhoun County to near a tenth of an inch in the northern Brush Country.

The severe drought persisted over southern portions of the Brush Country east into the Coastal Bend with exceptional drought continuing from southern Duval County eastward to the western portions of Kleberg and Nueces Counties. The abundant rains from the previous months continued to sustain the northern portions of the Brush Country to the Victoria Crossroads during the month of November.

Mandatory water restrictions were invoked for the city of Corpus Christi as the combined lake capacity levels fell below 40 percent. The city of Victoria joined Laredo in placing city under voluntary water restrictions. Different stages of water restrictions continued for Beeville, Point Comfort, Alice, and King Ranch Santa Gertrudis District.

KLEBERG COUNTY --- 1.8 W RICARDO [27.42, -97.88]				
	11/03/12 16:30 CST		0	Hail (1.00 in)
	11/03/12 16:30 CST		0	Source: Fire Department/Rescue

Quarter sized hail was reported by the Kingsville Fire Department.

KLEBERG COUNTY --- RICARDO [27.42, -97.85]				
	11/03/12 17:00 CST		0	Hail (0.75 in)
	11/03/12 17:00 CST		0	Source: Fire Department/Rescue

Dime sized hail was reported in Ricardo by Kingsville Fire Department.

REFUGIO COUNTY --- 1.5 NNW BONNIE VIEW [28.19, -97.31]				
	11/03/12 18:00 CST		0	Hail (0.88 in)
	11/03/12 18:00 CST		0	Source: Trained Spotter

Nickel sized hail was reported 4 miles south of Woodsboro.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
REFUGIO COUNTY --- 1.5 NNW BONNIE VIEW [28.19, -97.31]				
	11/03/12 18:00 CST		1K	Thunderstorm Wind (EG 50 kt)
	11/03/12 18:00 CST		0	Source: Trained Spotter
Strong winds blew small tree limbs down 4 miles south of Woodsboro.				
NUECES COUNTY --- 0.8 SSW PORT ARANSAS ARPT [27.81, -97.09]				
	11/03/12 20:35 CST		0	Thunderstorm Wind (MG 53 kt)
	11/03/12 20:35 CST		0	Source: Mesonet
A 61 mph wind gust was measured by AWOS site at Mustang Beach Airport in Port Aransas.				
NUECES COUNTY --- 1.2 SW (NGP)NAS CORPUS CHRI [27.69, -97.29]				
	11/03/12 21:14 CST		0	Thunderstorm Wind (MG 53 kt)
	11/03/12 21:14 CST		0	Source: ASOS
A 61 mph wind gust was measured by the ASOS site at Truax Field on the Corpus Christi Naval Air Station.				
NUECES COUNTY --- 1.9 SW FLOUR BLUFF JCT [27.65, -97.30]				
	11/03/12 21:15 CST		0	Hail (0.88 in)
	11/03/12 21:15 CST		0	Source: Public
Nickel sized hail occurred in the Flour Bluff area.				
NUECES COUNTY --- 1.2 N FLOUR BLUFF JCT [27.69, -97.28]				
	11/03/12 21:20 CST		0	Thunderstorm Wind (MG 59 kt)
	11/03/12 21:20 CST		0	Source: ASOS
A wind gust of 68 mph was measured by the ASOS site at Truax Field on the Corpus Christi Naval Air Station.				
NUECES COUNTY --- FLOUR BLUFF JCT [27.67, -97.28], 3.6 N BOB HALL PIER [27.63, -97.24]				
	11/03/12 21:20 CST		25K	Thunderstorm Wind (EG 61 kt)
	11/03/12 21:30 CST		0	Source: Law Enforcement
Corpus Christi Police Department reported power poles were blown down on the John F. Kennedy Causeway. All westbound traffic from the island was blocked.				
NUECES COUNTY --- 1.5 NNE BOB HALL PIER [27.60, -97.22], 1.7 NNE BOB HALL PIER [27.60, -97.22]				
	11/03/12 21:30 CST		0	Hail (0.88 in)
	11/03/12 21:30 CST		0	Source: Trained Spotter
Nickel sized hail was reported by the public on Padre Island near Whitecap Boulevard.				
Higher moisture from the western Gulf of Mexico moved into the Coastal Bend during the day on November 3rd. With a more unstable air mass in place, scattered thunderstorms developed along the sea breeze boundary in the afternoon. A jet of stronger winds aloft moved into the region from northern Mexico increasing the atmospheric shear profile also. Isolated thunderstorms increased in intensity, producing large hail and wind gusts from 60 to 70 mph over the Coastal Bend as the storms moved back toward the coast.				
(TX-Z231) LIVE OAK				
	11/26/12 13:00 CST		0	Wildfire
	11/26/12 21:00 CST		0	
A wildfire occurred through brush on a dry lake bed on the northern reaches of Lake Corpus Christi. The wildfire burned almost 800 acres and threatened a few homes in the area.				

TEXAS, North

(TX-Z092) COOKE, (TX-Z093) GRAYSON, (TX-Z094) FANNIN, (TX-Z095) LAMAR, (TX-Z103) DENTON, (TX-Z104) COLLIN, (TX-Z130) ERATH, (TX-Z131) HOOD, (TX-Z132) SOMERVELL, (TX-Z141) COMANCHE, (TX-Z144) BOSQUE

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		51K	

Drought conditions were ongoing and worsened for locations of North Texas. Areas near the Red River and western portions of the County Warning Area began the month in severe drought and with little to no rainfall drought classifications were downgraded to extreme drought (D3).

ANDERSON COUNTY --- 1.2 E TENNESSEE COLONY [31.83, -95.83]

11/03/12 14:55 CST	0	Hail (1.00 in)
11/03/12 14:58 CST	0	Source: Public

Quarter sized hail was reported near the intersections of Anderson County roads 2304 and 2311.

ROCKWALL COUNTY --- 1.4 WNW BLACKLAND [32.91, -96.37]

11/03/12 18:15 CST	0	Hail (1.00 in)
11/03/12 18:23 CST	0	Source: Public

Nickel to Quarter sized hail south of Fate, near the intersections of FM551 and State Highway 276.

ROCKWALL COUNTY --- 1.8 SE FATE [32.93, -96.36]

11/03/12 18:21 CST	0	Hail (0.88 in)
11/03/12 18:23 CST	0	Source: Amateur Radio

Amateur Radio operators reported nickel sized hail near Union Valley.

A line of thunderstorms developed along a cold front which moved across North and Central Texas. The strongest cells within the line produced sporadic reports of hail.

(TX-Z105) HUNT, (TX-Z106) DELTA, (TX-Z133) JOHNSON, (TX-Z134) ELLIS, (TX-Z142) MILLS, (TX-Z143) HAMILTON, (TX-Z145) HILL, (TX-Z157) CORYELL

11/13/12 00:00 CST	0	Drought
11/30/12 23:59 CST	16K	

With little to no rainfall across the area throughout the month of November counties that were not classified in drought at the beginning of the month were downgraded to severe drought (D2) by the end of the month.

(TX-Z107) HOPKINS, (TX-Z116) PALO PINTO, (TX-Z117) PARKER, (TX-Z118) TARRANT, (TX-Z129) EASTLAND, (TX-Z156) LAMPASAS, (TX-Z158) BELL, (TX-Z159) MCLENNAN, (TX-Z160) FALLS

11/20/12 00:00 CST	0	Drought
11/30/12 23:59 CST	18K	

With little to no rainfall across the area throughout the month of November counties that were not classified in drought at the beginning of the month were downgraded to severe drought (D2) by the end of the month.

(TX-Z100) YOUNG, (TX-Z101) JACK, (TX-Z102) WISE, (TX-Z115) STEPHENS, (TX-Z146) NAVARRO, (TX-Z147) FREESTONE, (TX-Z161) LIMESTONE

11/27/12 00:00 CST	0	Drought
11/30/12 23:59 CST	7K	

With little to no rainfall across the area throughout the month of November counties that were not classified in drought at the beginning of the month were downgraded to severe drought (D2) by the end of the month.

TEXAS, North Panhandle

(TX-Z001) DALLAM, (TX-Z002) SHERMAN, (TX-Z003) HANSFORD, (TX-Z004) OCHILTREE, (TX-Z005) LIPSCOMB, (TX-Z006) HARTLEY, (TX-Z007) MOORE, (TX-Z008) HUTCHINSON, (TX-Z009) ROBERTS, (TX-Z010) HEMPHILL, (TX-Z011) OLDDHAM, (TX-Z012) POTTER, (TX-Z013) CARSON, (TX-Z014) GRAY, (TX-Z015) WHEELER, (TX-Z016) DEAF SMITH, (TX-Z017) RANDALL, (TX-Z018) ARMSTRONG, (TX-Z019) DONLEY, (TX-Z020) COLLINGSWORTH

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0.51B	

A dry November caused the ongoing drought conditions to worsen across the Texas Panhandle. Exceptional (D4) drought affects the

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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majority of the north Texas Panhandle including Carson County. Extreme (D3) drought affects most of the southern Texas Panhandle minus the southeastern corner of the Texas Panhandle. Severe (D2) drought affects parts of the southeastern corner of the Texas Panhandle.

There were very few opportunities for the Texas Panhandle to see any relief in the form of precipitation and even fewer locations saw any precipitation during the month of November. The only reason the entire Texas Panhandle is not under D3 and D4 Drought is because of the convection that developed over the southeastern Texas Panhandle on November 10th. Amarillo recorded 0.01 inches of precipitation for November (0.79 inches below normal), Dalhart recorded 0.00 inches (0.58 inches below normal), and Borger recorded a trace of precipitation (0.84 inches below normal). This lack of rain placed this November as the 9th driest for the Texas High Plains region on record. Also this November was the 7th warmest November for the Texas High Plains region on record.

The dry conditions and more frequent freezes throughout the month of November have helped to further cure fuels across the Panhandle. This has led to a marginal increase in the Keetch-Byram Drought Index for the north Texas Panhandle placing it in the 600 to 800 range while the rest of the Panhandles stayed relatively steady state within the 400 to 600 range. These prime conditions for the spread of wildfires has led to countywide burn bans for all of the Texas Panhandle except for Hansford County.

The lack of rain during both October and November has limited the growth of dryland winter wheat. In some counties where dryland crops are planted, crops have already failed or even failed to emerge. Irrigated fields showed average growth but have required significant supplemental watering. Rangeland and pastures across the Texas Panhandle have remained in very poor condition and cattle have continued to require supplemental feed as observed by the Texas Crop and Weather Report. The Palmer Drought Severity Index remained steady state this month with the Texas High Plains region in the Extreme Drought rating.

Reservoirs and streamflows across the Panhandles have remained well below normal levels. The reservoirs of Palo Duro and Greenbelt Lake are both below 12 percent capacity with Lake Meredith below 1 percent capacity. Water watches for several public water systems persisted through November while voluntary to mandatory water restrictions have been enacted.

Economic losses due to the drought through November were estimated between \$20 and \$30 million a county, and were predominately the result of poor growth of winter wheat, heavy supplemental watering, and supplemental feed for cattle in pastures and rangeland.

(TX-Z003) HANSFORD, (TX-Z006) HARTLEY, (TX-Z007) MOORE, (TX-Z016) DEAF SMITH

11/10/12 11:52 CST	0	High Wind (MAX 55 kt)
11/10/12 13:36 CST	0	

A potent weather system moved across the Great Plains region during the day of the 10th. This system brought a lee side low into southeastern Colorado with a cold front stretching back to the southwest across New Mexico by mid-morning. At the same time a 46 mph (40kt) low level jet and a 63 mph (55 kt) 500mb jet was setting up across the Texas Panhandle.

As the morning progressed boundary layer mixing and the approaching low pressure center allowed a steady increase of surface wind gusts. By 9 AM CST wind gusts of 30 to 35 mph (26-30 kt) out of the southwest were already being reported. The first High Wind report of 58 mph (50 kt) came in at 11:52 AM CST from the West Texas Mesonet site at Bootleg (Deaf Smith County).

As the day progressed, mixing continued to bring stronger winds aloft to the surface. The 6 PM CST upper air sounding from Amarillo showed that winds from as high as 500mb, where winds were 75 to 86 mph (65 to 75 kt), were able to mix down to the surface. This culminated in a max wind gust for the Texas Panhandle of 63 mph (55 kt) at both the West Texas Mesonet site in Bootleg (Deaf Smith County) and at the Dalhart (Hartley County) ASOS.

No reports of injuries or fatalities were reported in relation to the high winds.

The following is a listing of the highest wind reports from the West Texas Mesonet, KVII Schoolnet, Texas Department of Transportation AWOS, and ASOS: Bootleg (Deaf Smith County) 63 mph; Dalhart (Hartley County) 63 mph; Gruver Junior High School (Hansford County) 59 mph; and Dumas (Moore County) 58 mph.

WHEELER COUNTY --- 5.6 NNW KELTON [35.48, -100.16], 8.1 NNE ALLISON [35.70, -100.02]

11/10/12 19:10 CST	0	Hail (1.00 in)
11/10/12 19:17 CST	0	Source: COOP Observer

The left moving portion of a storm split intensified as it moved across Wheeler County. As it moved north-northeast across the county it passed over a COOP observer in Allison (Wheeler County) who reported 1 inch hail. The storm continued to move to the north-northeast and exited state of Texas.

GRAY COUNTY --- 0.9 SE MC LEAN [35.22, -100.59], 3.8 NE MC LEAN [35.26, -100.55]

11/10/12 20:35 CST	0	Thunderstorm Wind (MG 56 kt)
11/10/12 20:35 CST	0	Source: Mesonet

A KVII schoolnet (mesonet) site recorded a thunderstorm wind gust of 65 mph (56 kt) as a thunderstorm moved over the city of McLean (Gray County).

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
DONLEY COUNTY --- 2.2 WSW LELIA LAKE [34.89, -100.82], 3.3 ENE LELIA LAKE [34.91, -100.72]				
	11/10/12 20:44 CST		0	Hail (0.75 in)
	11/10/12 20:46 CST		0	Source: Storm Chaser

A storm chaser on Highway 287 reported Pea size hail covering the highway.

A 500mb negatively tilted shortwave sparked convection during the evening hours of November 10th from southwest Minnesota into the eastern Texas Panhandle. Convection over the eastern Texas Panhandle started out as isolated cells ahead of a cold front moving across the Panhandle that developed into a linear complex. While the storms were isolated in nature they posed primarily a severe hail threat. This was verified by a 1 inch hail report out of Allison (Wheeler County). However, as convection transitioned into a linear complex the main threat became severe thunderstorm wind gusts. This was also confirmed when a 65 mph (56 kt) thunderstorm wind gust was recorded by the McLean (Gray County) mesonet site. Convection continued well into the early morning hours of the 11th, but severe reports ceased by 9 PM CST on the 10th.

TEXAS, Northeast

(TX-Z096) RED RIVER, (TX-Z097) BOWIE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

D2 Severe Drought conditions developed during the early part of the month along the Red River in extreme northern Red River and Bowie Counties in Northeast Texas. As the month continued, these conditions worsened to include nearly all of the counties with the northern third of Red River County Texas drought worsening to D3 Extreme Drought Conditions. Rainfall for the month of November across these 2 counties ranged from near one quarter of an inch across portions of Red River County to near 3 inches across portions of Bowie County Texas.

UPSHUR COUNTY --- INDIAN ROCK [32.70, -94.87]

11/11/12 14:45 CST	0	Thunderstorm Wind (EG 53 kt)
11/11/12 14:45 CST	0	Source: Public

A large tree was downed on FM. 1650.

MARION COUNTY --- 0.7 N JEFFERSON [32.76, -94.35]

11/11/12 16:15 CST	0	Thunderstorm Wind (EG 52 kt)
11/11/12 16:15 CST	0	Source: Law Enforcement

Powerlines were downed in Jefferson, Texas.

HARRISON COUNTY --- 1.4 ENE MARSHALL [32.54, -94.35]

11/11/12 16:45 CST	0	Thunderstorm Wind (EG 54 kt)
11/11/12 16:45 CST	0	Source: Law Enforcement

Trees were downed in Harrison County in the vicinity of Marshall, Texas.

GREGG COUNTY --- 1.5 NNE (GGG)GREGG CO ARPT L [32.40, -94.71]

11/11/12 21:10 CST	0	Hail (0.75 in)
11/11/12 21:10 CST	0	Source: Trained Spotter

Dime sized hail was reported on Hwy. 322 in Lakeport, Texas.

GREGG COUNTY --- 1.5 NNW LONGVIEW EASTSIDE AR [32.52, -94.71]

11/11/12 21:15 CST	0	Hail (0.75 in)
11/11/12 21:15 CST	0	Source: Trained Spotter

Dime sized hail was reported on FM. 968 about 2 miles east of Loop 281.

MARION COUNTY --- 2.2 SW KELLEYVILLE [32.76, -94.45]

11/11/12 21:40 CST	0	Hail (0.75 in)
11/11/12 21:40 CST	0	Source: Trained Spotter

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Dime sized hail was reported on Hwy. 49 approximately 6 miles west of Jefferson, Texas.

A potent upper level trough moved across the Central Plains, pushing a strong cold front across North Texas and Central Oklahoma and through the Four State Region. Storms began developing ahead of the front along a pre-frontal trough axis across parts of East Texas and slowly propagated eastward. The front eventually merged with the pre-frontal trough, as the storms intensified and continued to push across the area.

SHELBY COUNTY --- TIMPSON [31.90, -94.40]

11/26/12 20:25 CST	0	Hail (0.88 in)
11/26/12 20:25 CST	0	Source: Public

PANOLA COUNTY --- CARTHAGE [32.15, -94.35]

11/26/12 23:20 CST	0	Hail (1.00 in)
11/26/12 23:20 CST	0	Source: Broadcast Media

A moderately unstable environment developed across Northeast Texas during the late afternoon and evening hours of November 26th. Southerly winds allowed for afternoon temperatures to warm into the upper 70s and lower 80s during the day. This atmosphere however was capped through much of the day but later in the evening...an upper level disturbance and associated cold front helped to weaken the cap such that strong to severe thunderstorms developed across portions of the region. These storms were mostly hail producers and were very isolated in nature.

TEXAS, South

(TX-Z248) ZAPATA, (TX-Z249) JIM HOGG, (TX-Z250) BROOKS, (TX-Z251) KENEDY, (TX-Z252) STARR, (TX-Z253) HIDALGO, (TX-Z254) WILLACY, (TX-Z255) CAMERON, (TX-Z256) COASTAL WILLACY, (TX-Z257) COASTAL CAMERON

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Spotty rainfall seemed to be the rule for November instead of the exception. The first week of November began with isolated showers and thunderstorms that formed along the sea breeze and associated outflow boundaries. These showers and thunderstorms provided much needed rain, but the rain did little for most areas. As the month progressed, a series of cold fronts moved across the Rio Grande Valley and Deep South Texas. Showers and thunderstorms formed along and ahead of these fronts provided welcome relief, but the events were overall short lived and rainfall totals varied greatly across the region. The best rainfall compared to average favored the ranchlands of Starr County, while very little rain fell along the coast and across the Rio Grande Plains of Zapata County. Unfortunately, there was not enough rain to improve drought conditions. The rain allowed some areas to maintain a steady state, neither improving or intensifying, while elsewhere drought conditions intensified.

(TX-Z252) STARR

11/06/12 00:00 CST	0	Drought
11/19/12 23:59 CST	0	

The lack of rainfall during the last couple of days of October and first few days of November brought a reintensification of drought conditions, from Moderate (D1) to Severe (D2) for most of Starr County, Texas.

(TX-Z252) STARR

11/20/12 00:00 CST	0	Drought
11/26/12 23:59 CST	0	

Continued rain-free and relatively dry weather across portions of the Upper Rio Grande Valley worsened drought conditions across much of Starr County, Texas, just prior to Thanksgiving Weekend.

(TX-Z249) JIM HOGG, (TX-Z252) STARR, (TX-Z255) CAMERON

11/27/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The passage of several cold fronts during the latter half of November dropped some beneficial rain across portions of the Rio Grande Valley and Deep South Texas. One front, a slow mover on Thanksgiving Weekend (Saturday evening), dropped between an inch and two inches of rain during this period in much of Starr County. To the north of Starr County, Jim Hogg County also saw beneficial rainfall in the amount of three quarters of an inch to an inch of rainfall with pockets up to 1 1/2 inches. These two counties would be the only ones in the Rio Grande Valley and Deep South Texas to see any improvement in drought conditions for the month of November.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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The rains that improved soil moisture content across portions of the Upper Valley/Brush Country faded to little more than sprinkles in the Lower Valley. Portions of Cameron County failed to reach one quarter inch for the month and fell 1 to 2 inches below an already dry monthly average. Drought levels returned to Extreme (D3) for the entire county to close the month.

TEXAS, South Central

(TX-Z172) BURNET, (TX-Z173) WILLIAMSON, (TX-Z183) VAL VERDE, (TX-Z184) EDWARDS, (TX-Z185) REAL, (TX-Z186) KERR, (TX-Z187) BANDERA, (TX-Z188) GILLESPIE, (TX-Z194) LEE, (TX-Z202) KINNEY, (TX-Z203) UVALDE, (TX-Z222) KARNES

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

South Central Texas continued to have below normal rainfall in November. No counties had an improvement in drought status. In addition to the three counties in severe (D2) drought status in October (Edwards, Kerr, and Val Verde), nine additional counties entered D2 status in November (Bandera, Burnet, Gillespie, Karnes, Kinney, Lee, Real, Uvalde, and Williamson). Fire danger was moderate and 14 counties in the area had burn bans in effect. Area lakes and reservoirs continued below normal pool elevations with Lake Amistad around 34 feet below normal, Lake Travis near 49 feet below normal, and Medina Lake 69 feet below normal. The Edwards Aquifer was 19.2 feet below normal, and just over 2 feet below the level in November 2011. Uvalde was in stage 3 water restrictions, Austin and San Marcos were in stage 2 water restrictions, and Kerrville was in Stage 1 water restrictions.

TEXAS, South Panhandle

(TX-Z021) PARMER, (TX-Z022) CASTRO, (TX-Z023) SWISHER, (TX-Z024) BRISCOE, (TX-Z025) HALL, (TX-Z026) CHILDRESS, (TX-Z027) BAILEY, (TX-Z028) LAMB, (TX-Z029) HALE, (TX-Z030) FLOYD, (TX-Z031) MOTLEY, (TX-Z032) COTTLE, (TX-Z033) COCHRAN, (TX-Z034) HOCKLEY, (TX-Z035) LUBBOCK, (TX-Z036) CROSBY, (TX-Z037) DICKENS, (TX-Z038) KING, (TX-Z039) YOAKUM, (TX-Z040) TERRY, (TX-Z041) LYNN, (TX-Z042) GARZA, (TX-Z043) KENT, (TX-Z044) STONEWALL

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	50M	

Drought conditions worsened during the month of November largely due to well above seasonal average temperatures and well below normal precipitation. Extreme (D3) drought had expanded to encompass the majority of the South Plains area. Exceptional (D4) drought had also slightly expanded across the western South Plains and Stonewall County. Only a small amount of Severe (D2) drought remained in the far southern Texas panhandle and northern Rolling Plains.

November was mainly characterized by dry and warm conditions. The mean temperature at Lubbock and Childress were 55.1 and 56.4 degrees, respectively. These ranked as the fourth warmest November at both Lubbock and Childress at 5.3 and 4.8 degrees above normal. Additionally, several maximum temperature records were set during the month. Rainfall was also scarce throughout the entire month with most locations reporting less than one tenth of an inch. Lubbock only recorded a paltry 0.01 inches of rainfall. Keetch-Byram Drought Index values only slightly increased by the end of November. Highest values were observed across the western South Plains between 500-600. The rest of the South Plains saw values between 400-500 while the Rolling Plains were observed at 300-500.

The lack of rainfall was causing stress on winter crops. Much of the winter wheat crop was being reported as poor to very poor through November. Even though fire danger levels increased there was a lack of wildfire activity. This was chiefly due to an absence of strong winds and minimal agricultural burning.

Economic losses due to drought through November since the drought began were estimated near \$2.5 billion.

TEXAS, Southeast

(TX-Z215) JEFFERSON

11/22/12 08:45 CST	6M	Dense Fog
11/22/12 09:45 CST	0	

An area of dense fog on Interstate 10 lead to massive pileup.

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
TEXAS, West				
(TX-Z074) DAVIS / APACHE MOUNTAINS AREA, (TX-Z258) GUADALUPE MOUNTAINS OF CULBERSON COUNTY				
	11/10/12 09:51 MST		0	High Wind (MAX 60 kt)
	11/11/12 10:51 MST		0	
(TX-Z074) DAVIS / APACHE MOUNTAINS AREA, (TX-Z258) GUADALUPE MOUNTAINS OF CULBERSON COUNTY				
	11/10/12 11:40 CST		0	High Wind (MAX 60 kt)
	11/10/12 12:10 CST		0	
Strong mid level winds associated with a passing upper trough resulted in strong winds in the Guadalupe Mountains, and in the higher elevations of the Davis Mountains.				
(TX-Z258) GUADALUPE MOUNTAINS OF CULBERSON COUNTY				
	11/23/12 00:51 MST		0	High Wind (MAX 51 kt)
	11/23/12 10:51 MST		0	
Gusty northeast winds occurred in Guadalupe Pass behind a strong cold front.				
(TX-Z258) GUADALUPE MOUNTAINS OF CULBERSON COUNTY				
	11/26/12 19:51 MST		0	High Wind (MAX 52 kt)
	11/27/12 01:51 MST		0	
Northeast winds increased to 40-45 mph in Guadalupe Pass behind a strong cold front.				
TEXAS, Western North				
(TX-Z083) HARDEMAN, (TX-Z084) FOARD, (TX-Z085) WILBARGER, (TX-Z086) WICHITA, (TX-Z087) KNOX, (TX-Z088) BAYLOR, (TX-Z089) ARCHER, (TX-Z090) CLAY				
	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	
Very few rainfall events occurred during the month of November over northern Texas. This allowed drought conditions to persist or even worsen in some areas.				
UTAH, East				
(UT-Z022) SOUTHEAST UTAH, (UT-Z023) EASTERN UTAH MOUNTAINS, (UT-Z024) EASTERN UTAH BASIN, (UT-Z025) TAVAPUTS PLATEAU, (UT-Z027) GRAND FLAT AND ARCHES, (UT-Z028) LA SAL & ABAJO MOUNTAINS, (UT-Z029) CANYONLANDS / NATURAL BRIDGES				
	11/01/12 00:00 MST		0	Drought
	11/30/12 23:59 MST		0	
The mid fall period of 2012 remained dry across most of Eastern Utah with most reporting stations receiving below normal precipitation under warmer than normal conditions. There was some relief across the higher terrain of the eastern Uinta Mountain Range where drought conditions improved slightly.				
(UT-Z023) EASTERN UTAH MOUNTAINS				
	11/09/12 03:00 MST		0	Winter Storm
	11/10/12 20:00 MST		0	
(UT-Z025) TAVAPUTS PLATEAU, (UT-Z028) LA SAL & ABAJO MOUNTAINS				
	11/09/12 23:00 MST		0	Winter Weather
	11/10/12 21:00 MST		0	
A strong Pacific trough and associated cold front brought significant snow accumulations and strong winds to the mountains of eastern Utah.				

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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UTAH, West and Central

(UT-Z003) SALT LAKE AND TOOELE VALLEYS, (UT-Z005) GREAT SALT LAKE DESERT AND MOUNTAINS, (UT-Z015) WEST CENTRAL UTAH

11/08/12 10:00 MST	0	High Wind (MAX 64 kt)
11/09/12 05:50 MST	0	

(UT-Z002) NORTHERN WASATCH FRONT, (UT-Z003) SALT LAKE AND TOOELE VALLEYS, (UT-Z004) SOUTHERN WASATCH FRONT, (UT-Z007) WASATCH MOUNTAINS I-80 NORTH, (UT-Z008) WASATCH MOUNTAINS SOUTH OF I-80, (UT-Z009) WESTERN UTAH MOUNTAINS, (UT-Z010) WASATCH PLATEAU/BOOK CLIFFS, (UT-Z015) WEST CENTRAL UTAH, (UT-Z517) CENTRAL MOUNTAINS, (UT-Z518) SOUTHERN MOUNTAINS

11/09/12 01:00 MST	0.18M	Winter Storm
11/11/12 17:00 MST	0	

UTAH COUNTY --- 4.3 WNW LAKE SHR [40.14, -111.81]

11/10/12 12:45 MST	0	Funnel Cloud
11/10/12 12:50 MST	0	Source: Public

During a period of lake effect snowfall, a funnel cloud formed over the southern Wasatch Front, near the southern end of Utah Lake. It was spotted by a member of the general public who was near Provo Municipal Airport, and the funnel cloud dissipated fairly quickly without touching the ground.

A strong winter storm moved into Utah beginning November 8, bringing gusty winds, heavy snow, and even a funnel cloud to the state. The first wave brought the winds and a burst of heavy, wet snow, while the majority of the snowfall along the Wasatch Front occurred after colder air moved into the area, producing widespread lake effect snow.

VIRGINIA, North

(VA-Z027) SHENANDOAH

11/02/12 03:45 EST	0	Frost/Freeze
11/02/12 04:00 EST	0	

An upper trough over the Northeast and a shortwave trough to our south made for partly cloudy conditions overnight. Temperatures were able to reach freezing in the Shenandoah Valley.

(VA-Z025) AUGUSTA, (VA-Z026) ROCKINGHAM, (VA-Z029) PAGE, (VA-Z030) WARREN, (VA-Z036) NELSON, (VA-Z037) ALBEMARLE, (VA-Z038) GREENE, (VA-Z039) MADISON, (VA-Z040) RAPPAHANNOCK, (VA-Z050) ORANGE, (VA-Z051) CULPEPER

11/05/12 00:00 EST	0	Frost/Freeze
11/05/12 08:30 EST	0	

High pressure over the Mid Atlantic led to temperatures to drop below freezing overnight.

(VA-Z042) LOUDOUN, (VA-Z052) PRINCE WILLIAM, (VA-Z053) FAIRFAX, (VA-Z054) ARLINGTON, (VA-Z055) STAFFORD, (VA-Z056) SPOTSYLVANIA, (VA-Z057) KING GEORGE, (VA-Z501) NORTHERN FAUQUIER, (VA-Z502) SOUTHERN FAUQUIER

11/06/12 02:00 EST	0	Frost/Freeze
11/06/12 08:30 EST	0	

High pressure over the Mid Atlantic led to temperatures to drop below freezing overnight.

(VA-Z025) AUGUSTA, (VA-Z027) SHENANDOAH, (VA-Z029) PAGE, (VA-Z030) WARREN

11/21/12 02:00 EST	0	Dense Fog
11/21/12 10:30 EST	0	

High pressure stretched along the entire eastern seaboard overnight and into the morning. Fog formed in areas of calm winds and temperatures near freezing in the MD/VA Piedmont and valleys west of the Allegheny Front.

WASHINGTON, Northeast

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(WA-Z037) NORTHEAST MOUNTAINS				
	11/08/12 15:00 PST		0	Heavy Snow
	11/09/12 11:00 PST		0	
<p>A surface low pressure system spun up in eastern Washington in the afternoon on the eight and moved little as the low eventually filled in and dissipated during the morning hours on the ninth. Moisture rotating in around the low pressure system resulted in bands of snow that developed across the Northeast Mountains along the northern flank of the low. Heavy snowfall was primarily localized to the very northeast portion of Washington due to the nearly stationary movement of this weather system. Numerous reports of four to five inches of snow were reported in the valleys.</p>				
(WA-Z044) WATERVILLE PLATEAU				
	11/11/12 18:00 PST		0	Heavy Snow
	11/12/12 04:30 PST		0	
<p>Cold and dry continental air trapped itself up against the east slopes of the northern cascades, which included the Waterville Plateau into the western Columbia Basin. Pushing in off of the eastern Pacific was an occluded front with moist isentropic ascent developing out ahead of the front. Lifting was aided ahead of the front by good easterly flow into the area, which resulted in a more favorable orographic component. Snowfall amounts of four to five inches were reported on the Waterville Plateau before the front shifted eastward on the twelfth.</p>				
(WA-Z037) NORTHEAST MOUNTAINS, (WA-Z038) OKANOGAN HIGHLANDS, (WA-Z042) EAST SLOPES NORTHERN CASCADES				
	11/18/12 14:00 PST		0	Heavy Snow
	11/19/12 16:00 PST		0	
PEND OREILLE COUNTY --- 3.5 SSW METALINE [48.80, -117.41], 3.4 SSW METALINE [48.80, -117.41], 3.6 SSW METALINE [48.80, -117.41], 3.6 SSW METALINE [48.80, -117.41]				
	11/19/12 09:50 PST		0	Debris Flow
	11/19/12 10:00 PST		0	Source: Fire Department/Rescue
<p>A rock slide blocked the north bound lane on State Route 31 at milepost 8. Short delays were reported as traffic in both directions alternated the use of the south bound lane.</p>				
WHITMAN COUNTY --- ST JOHN [47.10, -117.57]				
	11/19/12 13:53 PST		0	Funnel Cloud
	11/19/12 14:03 PST		0	Source: Broadcast Media
<p>A pair of funnel clouds was observed side by side near St. John.</p>				
WHITMAN COUNTY --- ST JOHN [47.10, -117.57]				
	11/19/12 13:55 PST		0	Funnel Cloud
	11/19/12 14:05 PST		0	Source: Broadcast Media
<p>A pair of funnel clouds was observed side by side near St. John.</p>				
<p>A moist warm front brought valley rain and mountain snow across the region. The moist system at times resulted in moderate precipitation rates, which resulted in saturated soils across mid-slopes and heavy snowfall accumulations at elevations above 3500 feet. This storm system also produced a pair of funnel clouds on the northern Palouse.</p>				
WASHINGTON, Northwest				
(WA-Z518) WEST SLOPES NORTHERN CASCADES AND PASSES, (WA-Z519) WEST SLOPES CENTRAL CASCADES AND PASSES				
	11/11/12 10:00 PST		0	Heavy Snow
	11/12/12 16:00 PST		0	
<p>A vigorous Pacific frontal system brought heavy snow to several locations in the Cascades.</p>				
(WA-Z001) SAN JUAN, (WA-Z503) WESTERN WHATCOM COUNTY, (WA-Z516) NORTH COAST				
	11/18/12 18:00 PST		0	High Wind (MAX 56 kt)
	11/19/12 01:46 PST		0	

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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A strong pressure gradient brought local high wind to the two coast zones and two of the four north interior zones.

(WA-Z504) SOUTHWEST INTERIOR, (WA-Z514) EASTERN STRAIT OF JUAN DE FUCA

11/18/12 18:00 PST	0.15M	Strong Wind (MAX 48 kt)
11/19/12 14:00 PST	0	

(WA-Z517) CENTRAL COAST

11/19/12 11:09 PST	25K	High Wind (MAX 36 kt)
11/19/12 13:09 PST	0	

High wind on the south Washington coast briefly affected Hoquiam on the central Washington coast. Strong wind caused power outages across western Washington.

(WA-Z518) WEST SLOPES NORTHERN CASCADES AND PASSES, (WA-Z519) WEST SLOPES CENTRAL CASCADES AND PASSES

11/18/12 19:00 PST	0	Heavy Snow
11/19/12 18:00 PST	0	

A strong Pacific frontal system and the Puget Sound Convergence Zone that formed in its wake brought heavy snow to the Cascades, especially at Stevens Pass.

GRAYS HARBOR COUNTY --- COSMOPOLIS [46.95, -123.77]

11/19/12 00:00 PST	15K	Heavy Rain
11/19/12 23:00 PST	0	Source: Newspaper

A hole about six foot, by six foot, opened up in the roadway. An SUV plunged front first into the hole and about 4 feet of mud. No one was injured. There was some minor building flooding in Aberdeen.

SNOHOMISH COUNTY --- EDMONDS [47.82, -122.38], MUKILTEO [47.95, -122.30], 1.0 ENE MUKILTEO [47.96, -122.28], 1.0 SSE EDMONDS [47.81, -122.37]

11/19/12 06:00 PST	2K	Debris Flow
11/19/12 18:00 PST	0	Source: Newspaper

Mudslides effected the tracks that commuter trains travel between Everett and Seattle. Passenger trains were cancelled for 48 hours.

Heavy rain caused local flooding and mudslides. A large hole developed in the middle of a road in Cosmopolis. 24 hour rainfall amounts were 2.97" in Hoquiam, 4.09" in Bremerton, and 6 inches at Cushman Dam on the Olympic Peninsula.

(WA-Z518) WEST SLOPES NORTHERN CASCADES AND PASSES

11/21/12 01:00 PST	0	Heavy Snow
11/21/12 19:00 PST	0	

A Pacific frontal system brought heavy snow to the North Cascades at Mt Baker.

(WA-Z503) WESTERN WHATCOM COUNTY

11/29/12 11:38 PST	0	High Wind (MAX 36 kt)
11/29/12 13:38 PST	0	

There was brief high wind near Bellingham.

WASHINGTON, Southeast

(WA-Z520) EAST SLOPES OF THE WASHINGTON CASCADES

11/12/12 01:00 PST	0	Heavy Snow
11/12/12 10:00 PST	0	

A strong Pacific storm system brought heavy snow, which spilled over the East Slopes of the Washington Cascades the night of November 11th through the early morning hours of November 12th.

Snowfall amounts in inches include: 1 mile south of Cle Elum (6), 7 miles NNW of Easton (10), and the COOP observer in Easton reported

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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(9).

(WA-Z028) LOWER COLUMBIA BASIN

11/19/12 18:15 PST	0	High Wind (MAX 59 kt)
11/19/12 22:00 PST	0	

A strong upper level jet and tight surface pressure gradients aided in high winds across much of the Pendleton County Warning Area.

Measured gusts in MPH at 2 W Benton City (68).

WASHINGTON, Southwest

(WA-Z021) SOUTH COAST

11/11/12 16:15 PST	0	High Wind (MAX 37 kt)
11/12/12 03:00 PST	0	

A vigorous pacific frontal system brought strong winds to the Washington Coast.

(WA-Z020) SOUTHWEST INTERIOR, (WA-Z021) SOUTH COAST

11/18/12 15:15 PST	0	High Wind (MAX 69 kt)
11/19/12 14:20 PST	0	

A strong pacific frontal system brought high winds to the Coast and Coast Range of Southwest Washington.

WAHIAKUM COUNTY --- 3.1 ENE GRAYS RIVER [46.37, -123.54], 2.6 NE GRAYS RIVER [46.38, -123.56], 1.4 NW GRAYS RIVER [46.36, -123.62], 2.4 WNW EDEN [46.31, -123.70], 1.1 WSW EDEN [46.29, -123.67]

11/19/12 02:56 PST	0	Flood (due to Heavy Rain)
11/20/12 06:30 PST	0	Source: Other Federal Agency

Heavy rain caused the Grays River near Rosburg to overflow its banks and flood low lying areas. The Grays River crested at 16.0 feet on November 19th at 3 pm PST, 4.0 feet above flood stage.

PACIFIC COUNTY --- 1.1 N RAYMOND [46.70, -123.73], 0.2 ESE RAYMOND [46.68, -123.73], 1.3 SSW WILLAPA [46.65, -123.68], 1.0 NNE WILLAPA [46.68, -123.66], 1.8 NE RAYMOND [46.70, -123.70]

11/19/12 14:07 PST	0	Flood (due to Heavy Rain)
11/20/12 03:32 PST	0	Source: Other Federal Agency

Heavy rain caused the Willapa River near Willapa to overflow its banks and flood low lying areas. The Willapa River crested at 23.9 feet on November 19th at 9 pm PST, 2.9 feet above flood stage.

A strong warm front lifted north across the region accompanied by heavy rain on Sunday. Widespread heavy rain continued to impact the Pacific Northwest Monday and Monday night as the strong and very moist front stalled over the area.

WEST VIRGINIA, East

(WV-Z050) HAMPSHIRE, (WV-Z053) JEFFERSON, (WV-Z055) HARDY, (WV-Z504) EASTERN MINERAL

11/21/12 03:00 EST	0	Dense Fog
11/21/12 10:30 EST	0	

High pressure stretched along the entire eastern seaboard overnight and into the morning. Fog formed in areas of calm winds and temperatures near freezing in the MD/VA Piedmont and valleys west of the Allegheny Front.

WISCONSIN, Northeast

(WI-Z030) MARATHON

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/01/12 00:00 CST		0	Drought
	11/12/12 00:00 CST		0	

Rainfall on November 11th caused severe drought (D2) conditions across far western Marathon County to improve to at least moderate drought (D1) by the November 13th issuance of the Drought Monitor.

WOOD COUNTY --- 2.9 SSE MARSHFIELD MUNI ARPT [44.59, -90.16]

11/10/12 05:08 CST	0	Hail (0.75 in)
11/10/12 05:08 CST	0	Source: Law Enforcement

Penny size hail fell south of Marshfield.

A line of showers and isolated thunderstorms developed ahead of an approaching low pressure system. One of the storms produced penny size hail in central Wisconsin.

(WI-Z005) VILAS

11/23/12 03:00 CST	0	Winter Storm
11/23/12 15:00 CST	0	

Snow fell across north-central Wisconsin as a low pressure system passed north of the state. Once the system passed, lake-effect snow showers produced snow totals of 4 to 7 inches across Vilas County. The snow showers combined with northwest winds of 15 to 25 mph to cause blowing and drifting snow. The highest snow totals were 7.5 inches at Rest Lake, 7 inches at Winchester, 6.5 inches 3 miles northeast of Winchester and 5.3 inches 10 miles west of Land O Lakes.

(WI-Z005) VILAS, (WI-Z010) ONEIDA, (WI-Z018) LINCOLN

11/27/12 06:00 CST	0	Drought
11/30/12 23:59 CST	0	

Lack of significant rainfall for the last couple of weeks of November led to worsening drought conditions. Parts of Lincoln County, Oneida County and Vilas County that were experiencing moderate drought (D1) conditions earlier in the month, were classified as severe drought (D2) starting on the 27th of the month, and continuing into December 2012.

WISCONSIN, Northwest

(WI-Z001) DOUGLAS, (WI-Z004) IRON, (WI-Z006) BURNETT, (WI-Z007) WASHBURN, (WI-Z008) SAWYER, (WI-Z009) PRICE

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

The month began with severe drought conditions (D2) persisting over the western half of Burnett County. By the 27th the severe drought had expanded to cover an area from far western Douglas County, all of Burnett county, the southern half of Washburn County, extreme southern Sawyer County and most of Price County.

(WI-Z001) DOUGLAS, (WI-Z002) BAYFIELD, (WI-Z003) ASHLAND, (WI-Z004) IRON

11/22/12 19:00 CST	0	Heavy Snow
11/23/12 06:00 CST	0	

A low pressure system moved through northern Minnesota and Ontario on November 22nd, Thanksgiving Day. The combination of the system's synoptic snow and subsequent lake effect snow in the wake of the cold front resulted in up to a foot of snow in parts of northwestern Wisconsin. The greatest snowfall amounts, about 8 to 12 inches, stretched from east central Douglas County through the northern tier of Bayfield, Ashland, and Iron Counties. Several locations in northwestern Wisconsin measured 12.0 inches of snow, including Gile (Iron County), Cornucopia (Bayfield County), and Hawthorne (Douglas County). Ashland County's greatest snowfall measurement, 9.5 inches, was reported 2 miles northwest of Mellen.

WISCONSIN, Southeast

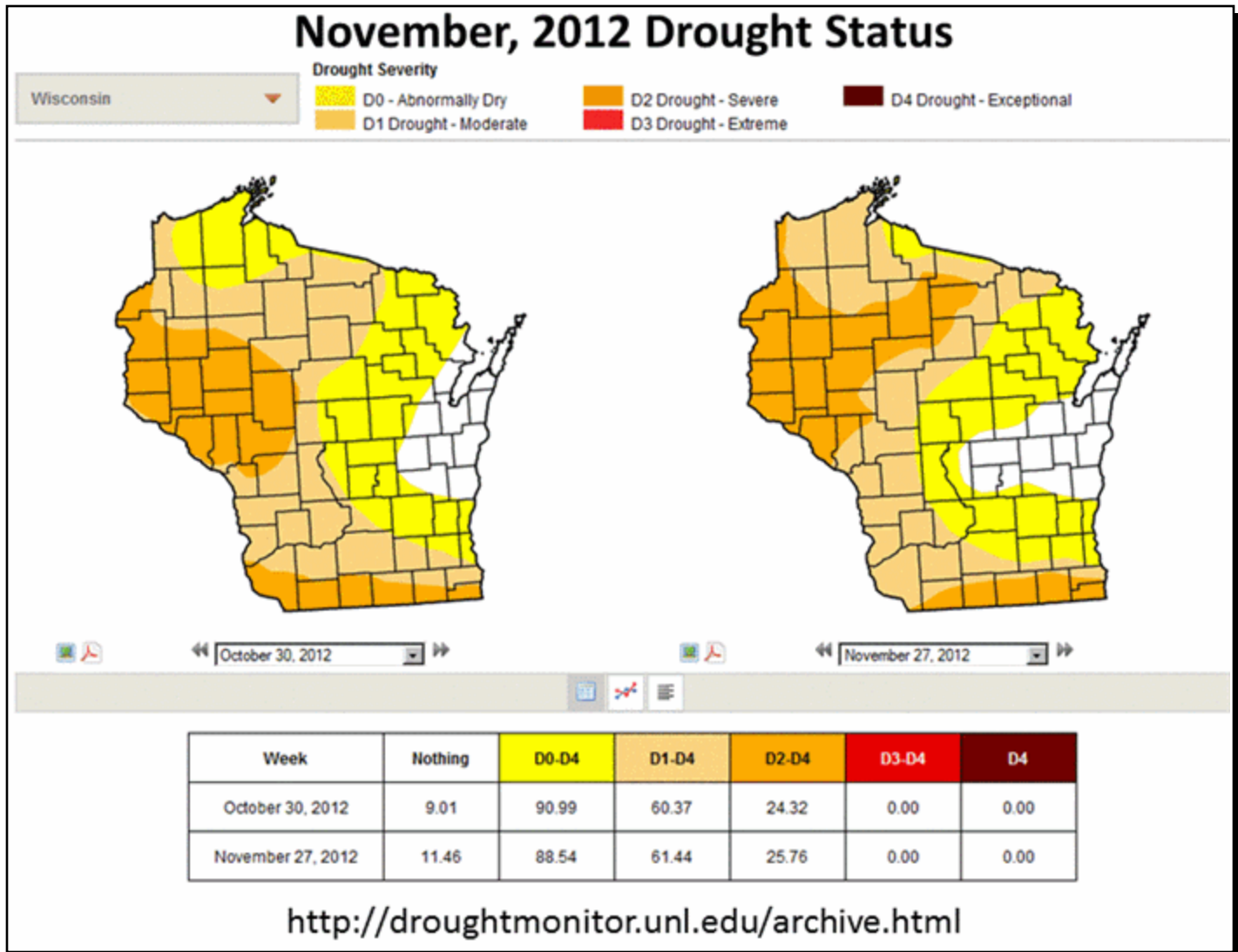
(WI-Z056) SAUK, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

11/01/12 00:00 CST	0	Drought
11/30/12 23:59 CST	0	

Storm Data and Unusual Weather Phenomena - November 2012

Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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Moderate (D1) to severe (D2) drought conditions persisted through all of November across the southern two tiers of Wisconsin's counties. The areal extent of D2 conditions showed remained nearly steady while the D1 area decreased slightly.



U.S. Drought Monitor images showing trend near the start and end of November, 2012.

(WI-Z052) SHEBOYGAN, (WI-Z066) MILWAUKEE, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

11/11/12 15:00 CST	17K	Strong Wind (MAX 43 kt)
11/11/12 18:00 CST	0	

Strong low-level winds gusting to 46 to 49 mph (40 to 43 knots) affected south-central and southeast Wisconsin on November 11th. Widely scattered power outages were reported due to wind-broken tree limbs impacting power-lines. These winds were associated with a deep mid-upper level trough, with 850 mb winds of 60 to 80 knots. Some of this high-momentum wind mixed down to the surface ahead of a strong cold front during the mid-morning to early evening hours.

(WI-Z052) SHEBOYGAN, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUKEE, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA

11/16/12 23:00 CST	0	Dense Fog
11/17/12 08:00 CST	0	

A large ridge of high pressure over the region brought clear skies and light winds, that when combined with abundant low-level moisture, produced dense fog over most of Southeast Wisconsin and far southern sections of South-Central Wisconsin. Visibilities were reduced to 1/4 mile or less roughly along and southeast of a Monroe, Madison, to Elkhart Lake line from late in the evening of

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
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November 16th into the early morning hours of November 17th. Several airplane flight departures and arrivals were delayed. Locations to the northwest saw drier air work in overnight that prevented the development of dense fog.

(WI-Z046) MARQUETTE, (WI-Z047) GREEN LAKE, (WI-Z051) FOND DU LAC, (WI-Z052) SHEBOYGAN, (WI-Z056) SAUK, (WI-Z057) COLUMBIA, (WI-Z058) DODGE, (WI-Z059) WASHINGTON, (WI-Z060) OZAUCKEE, (WI-Z062) IOWA, (WI-Z063) DANE, (WI-Z064) JEFFERSON, (WI-Z065) WAUKESHA, (WI-Z066) MILWAUKEE, (WI-Z067) LAFAYETTE, (WI-Z068) GREEN, (WI-Z069) ROCK, (WI-Z070) WALWORTH, (WI-Z071) RACINE, (WI-Z072) KENOSHA	11/20/12 17:00 CST		0	Dense Fog
	11/21/12 10:00 CST		0	

The axis of a ridge of high pressure crossed southern Wisconsin during the evening of November 20th and the early morning hours of November 21st. Clearing skies and abundant low-level moisture combined to produce widespread dense fog. The moist conditions had kept fog over southwest sections of South Central Wisconsin through most of the day, as well as over Sheboygan County. Visibilities at these locations went back down to 1/4 mile or less shortly after sunset on the 20th. The remainder of southern Wisconsin saw dense fog develop by mid-evening, with the fog lasting well into the daylight hours of November 21st. Several airplane flight departures and arrivals were delayed.

WISCONSIN, Southwest

(WI-Z017) TAYLOR, (WI-Z029) CLARK, (WI-Z032) BUFFALO, (WI-Z033) TREMPLEAU, (WI-Z034) JACKSON, (WI-Z041) LA CROSSE, (WI-Z042) MONROE, (WI-Z054) CRAWFORD, (WI-Z061) GRANT	11/01/12 00:00 CST		0	Drought
	11/30/12 23:59 CST		0	

Precipitation amounts across western Wisconsin averaged a half to 1.5 inches during the month of November. The drought conditions showed some improvement during the first half of the month with Clark, Jackson, La Crosse and Monroe Counties no longer classified as being in a severe drought. Conditions also temporarily improved over portions of Taylor and Trempealeau Counties, but by the end of the month, the severe drought covered the northern half of both counties along with all of Buffalo County. Dairy farmers were impacted by the drought during the latter half of the year because of higher feed costs. Milk production increased during the first part of the year leading to lower milk prices. Milk priced remained low over the latter half of the year, which combined with higher feed costs, caused the milk price to feed cost margin to drop to just above \$1 per hundredweight after being between \$7 and \$9 at this time in 2011. The USDA announced that the harvest price payout for crop insurance would be \$7.50 per bushel for corn and \$15.39 per bushel for soybeans while the non-harvest price payout would be \$5.68 per bushel for corn and \$12.55 per bushel for soybeans. Hay and roughage supplies heading into the winter were affected by the drought. 50% of the reports made to the USDA showed short supplies of hay and roughage. The USDA also indicated that soil moisture conditions were short or in very short supply across 50% of the state.

WYOMING, Central and West

(WY-Z005) SOUTHWEST BIG HORN BASIN, (WY-Z006) SOUTHEAST BIG HORN BASIN, (WY-Z023) STAR VALLEY	11/08/12 23:00 MST		0	Winter Storm
	11/10/12 13:00 MST		0	

A fast moving winter storm brought heavy snow to portions of western and central Wyoming. Up to 10 inches of snow fell across portions of the Star Valley with 6 to 8 inches across the southern Big Horn Basin from Thermopolis to Big Trails.

(WY-Z019) GREEN MOUNTAINS & RATTLESNAKE RANGE, (WY-Z020) NATRONA COUNTY LOWER ELEVATIONS, (WY-Z030) EAST SWEETWATER COUNTY	11/09/12 11:10 MST		0	High Wind (MAX 56 kt)
	11/09/12 13:10 MST		0	

High winds developed across portions of central and southern Wyoming ahead of an advancing cold front. Sustained winds of 40 mph and wind gusts of 58 mph to 65 mph were common in a region from eastern Sweetwater County to western Natrona County.

(WY-Z019) GREEN MOUNTAINS & RATTLESNAKE RANGE, (WY-Z020) NATRONA COUNTY LOWER ELEVATIONS	11/21/12 09:30 MST		0	High Wind (MAX 55 kt)
	11/21/12 16:10 MST		0	

Strong southwest flow ahead of an approaching cold front brought high winds to portions of central Wyoming. The strongest winds were recorded in western Natrona County. In that region, sustained winds of 40 mph or more and gusts to 63 mph were measured during the late morning and early afternoon.

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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
(WY-Z001) YELLOWSTONE NATIONAL PARK, (WY-Z012) TETON & GROS VENTRE MOUNTAINS, (WY-Z024) SALT RIVER & WYOMING RANGES				
	11/30/12 08:00 MST		0	Winter Storm
	11/30/12 23:59 MST		0	

A series of storms moved through western Wyoming beginning on November 30. Snowfall of up to one foot was estimated at several automated stations by midnight of that day. The snow continued into December. Please see the December 2012 Storm Data for the conclusion of this event.

WYOMING, North Central

(WY-Z099) SHERIDAN FOOTHILLS				
	11/09/12 15:00 MST		0	Winter Storm
	11/10/12 14:00 MST		0	

A cold air mass moved south out of Canada and combined with a powerful storm system that moved in from the Pacific Northwest Coast. This resulted in periods of heavy snow across portions of the Billings Forecast Area.

WYOMING, Southeast

(WY-Z109) CENTRAL CARBON COUNTY, (WY-Z111) SOUTHWEST CARBON COUNTY				
	11/09/12 10:53 MST		0	High Wind (MAX 56 kt)
	11/09/12 22:43 MST		0	

Strong and gusty southwest winds up to 65 mph affected Carbon County.

(WY-Z112) SIERRA MADRE RANGE, (WY-Z114) SNOWY RANGE				
	11/10/12 00:00 MST		0	Winter Weather
	11/10/12 19:00 MST		0	

A low pressure system moved across southern Wyoming and northern Colorado. A strong west to southwest upslope flow brought moderate to heavy snowfall to the Snowy and Sierra Madre mountains. Storm total snowfall accumulations of 6 to 12 inches were estimated.

(WY-Z106) CENTRAL LARAMIE RANGE AND SOUTHWEST PLATTE COUNTY, (WY-Z110) NORTH SNOWY RANGE FOOTHILLS, (WY-Z116) SOUTH LARAMIE RANGE, (WY-Z117) SOUTH LARAMIE RANGE FOOTHILLS				
	11/11/12 21:01 MST		0	High Wind (MAX 59 kt)
	11/12/12 10:06 MST		0	

A tight pressure gradient generated strong and gusty west to southwest winds for the wind corridors of Southeast Wyoming.

(WY-Z107) EAST PLATTE COUNTY, (WY-Z110) NORTH SNOWY RANGE FOOTHILLS, (WY-Z115) LARAMIE VALLEY, (WY-Z116) SOUTH LARAMIE RANGE, (WY-Z117) SOUTH LARAMIE RANGE FOOTHILLS				
	11/21/12 09:11 MST		0	High Wind (MAX 58 kt)
	11/22/12 13:55 MST		0	

A fast northwesterly wind flow aloft, a large surface pressure gradient and passing cold front generated strong and gusty westerly winds throughout much of south central and southeast Wyoming.

(WY-Z106) CENTRAL LARAMIE RANGE AND SOUTHWEST PLATTE COUNTY, (WY-Z110) NORTH SNOWY RANGE FOOTHILLS, (WY-Z116) SOUTH LARAMIE RANGE, (WY-Z117) SOUTH LARAMIE RANGE FOOTHILLS				
	11/24/12 04:55 MST		0	High Wind (MAX 57 kt)
	11/24/12 17:31 MST		0	

A potent upper level jet overhead and large surface pressure gradient produced strong and gusty west to southwest winds for the wind corridors of southeast Wyoming.

(WY-Z110) NORTH SNOWY RANGE FOOTHILLS, (WY-Z115) LARAMIE VALLEY, (WY-Z116) SOUTH LARAMIE RANGE				
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Location	Date/Time	Deaths & Injuries	Property & Crop Dmg	Event Type and Details
	11/27/12 10:27 MST		0	High Wind (MAX 55 kt)
	11/27/12 15:45 MST		0	

Strong winds in the upper atmosphere and a large surface pressure gradient produced a brief period of high winds over portions of southeast Wyoming.

(WY-Z110) NORTH SNOWY RANGE FOOTHILLS

11/30/12 21:36 MST	0	High Wind (MAX 62 kt)
11/30/12 23:59 MST	0	

A strong upper level disturbance and cold front moved across southeast Wyoming. Sustained west to southwest winds of 35 to 45 mph with gusts to near 70 mph occurred near the Arlington and Elk Mountain areas.